



# **Causes of girl's pupil dropout at secondary school in Bangladesh: Review of literature and empirical analysis**

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## **Abstract**

This paper provides a systematic review of the literature analysis and empirical analysis to find out the causes of girl's dropout at the secondary schools in Bangladesh. This paper has tried to shed on some specific causes of the myriad problems of girl's schooling in Bangladesh. The study is guided by feminist theory though the other theories have discussed considering the review of the literature. Following the systematic approach, those literature are taken from the Google scholar for the period of the year 2000 to recent. The findings of literature are summarized in the five main points heading: socio-cultural factor, economic factor, household factor, school factor, and political factor. Additionally, this study also provides a summary of the interventions program and recommendations from the literature context. Moreover, this paper has also used secondary data from the World Development Indicator and BANBEIS to evaluate the causal relationship of girl dropout with GDP per capita, child marriage. Using both literature review and empirical analysis as a basis, the main result of this analysis shows that increasing income has a significant effect in reducing girl dropout and this correlation becomes higher when included other independent variables such as child marriage. The study is unique in the sense that, it only focuses on the girl's dropout at the secondary level in Bangladesh which further follows the review of literature and secondary data analysis to provide the paper theoretical and numerical strength.

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## List of Abbreviations

BANBEIS	Bangladesh Bureau of Educational Information and Statistics
FSP	Financial Stipend Program
EFA	Education for All
SMC	Secondary School Management Committee
ADB	Asian Development Bank
NGO	Non-Government Organization
NORAD	Norwegian Agency for Development Cooperation
MDG	Millennium Development Goals
SDG	Sustainable Development Goals
BDH	Bangladesh Demographic and Health Survey
WDI	World Development Indicator
RCT	Randomized Control Trial
OVb	Omitted Variable Bias
IV	Instrumental Variable
ITS	Interrupted Time Series
DID	Difference in Differences
SER	Standard Error of the Regression



# 1. Introduction

Education works as a catalyst for the collaborative development of a person, family, nation, and world. It is the only silent weapon that can change the world holistically and positively. Thus, formal education is regarded as one of the necessities in the current world. Most of the countries in the world have gained success in primary education to achieve Education for All (EFA) goals. Secondary education is particularly important that it helps an individual to fit into the society's development by providing adequate knowledge, attributes and that is why this secondary level education has become a part of basic education (Rahman, Hamzah, Meerah, & Rahman, 2010, p. 114). An educated girl can contribute to the combined sustained development of a country (Ananga, 2011). Education for girls at secondary level especially in Bangladesh and other developing countries has a significant value that it can reduce poverty, child marriage, malnutrition and create an overall sustained development (Behrman, 2006; Chitrakar, 2009; Khanam, 2008; Pande, 2003; Shahidul, 2014; Yancey, 2015). In general, secondary education completion is the provision of the basic education that began at the primary level and main aim at laying the foundations for lifelong learning and human development, by offering more subject as well as skill-oriented instruction.

Based on the importance of girl's education, this thesis is particularly relevant in the development studies to know more about the dropout reasons as this is considered as an "under-researched area" by (Hunt, 2008, p. 1). Furthermore, studying the recent literature and identifying some questions for further research will help the [researcher](#) to work on this issue more deeply. Thus, this thesis paper divided into two sections. In the first section, the paper summarized the causes from the review of the literature context under five head points. In the second part, the secondary data are analysed to find out the most significant causes of the girl's dropout at secondary school in Bangladesh. Hence, the purpose of this thesis is to contribute to an existing body of extensive literature and secondary data, to shed some light on the significant issues that can help decision making in reducing girl's pupil dropout rates at secondary school in Bangladesh.

## 1.1 Objectives of the study

Bangladesh has a target to be a middle-income country by 2021 and a developed country by 2041; furthermore, this country is committed to the sustainable development Goals (SDG) of the United Nations (S. R. Nath, Ferris, Kabir, Chowdhury, & Hossain, 2017, p. 35). It would be challenging to fulfil this country's future target without adequately addressing the issue of the dropout of girls in secondary school education. Based on the Bangladesh Bureau of Educational Information and Statistics (BANBEIS) report, the dropout is almost double in the secondary level than the primary level as well as every year the rate of dropout is higher for female rather than male; such as, in 2015, the female dropout rate was 45.9%; on the other hand, male dropout was 33.7% found in the study of (S. R. Nath et al., 2017, p. 34). Considering the significance of secondary education for girls also higher dropout rate over the year, the main objective of this paper is below:

1. To identify the main causes of girl's dropout at secondary school in Bangladesh based on the systematic review of literature context,
2. To analyze the empirical data for supporting the significant causes among the literature findings
3. To help the future policymakers to have a glimpse over the issue theoretically and empirically.

And thus, answering the **research question**: What are the barriers prevalent in girls' education that causes higher dropout at the secondary level in Bangladesh? Furthermore, the title of the thesis and the girl's underprivileged condition for the continuous patriarchal practices of Bangladesh, emerge the thesis to follow the feminist theory.

## 1.2 Challenge in controlling girl's pupil dropout

In Bangladesh, the enrolment for girls is satisfactory than boys because of the several interventions attract the girl students (Khanam, 2008, p. 96), but the problem of dropout is even more significant. According to Nath et al. (2017), the drop out is so high at the secondary level that two-fifths of students admitted in primary never complete the secondary level (p. 32). The factors of dropout have more effect on girls that the enrolment and dropout rate is always higher for girls than boys (Holmes, 2003) and sometimes the dropout rate of girls is even asymmetrical in some areas of Bangladesh (Hossain, 2010). Bangladesh has achieved gender parity (Chitrakar, 2009), which is the outcome of several intervention programs (Huq & Rahman,

2008; Mahmud, 2003; Raynor, Wesson, & Keynes, 2006) and further results in the higher enrolment of girls at the primary and secondary level. However, the completion rate is lower for girls that is why in this study the focus mainly goes to the girl students. Bangladesh is practising patriarchal power, so it is assumed that the privilege of education in a family will go for boys. As well as there are also a lot of direct and indirect issues starting from child marriage to climate change, specially deter the female portion of students to go and continue their school. “The patterns and process of school dropout are likely to be substantially different for boys and girls” (Sabates, Hossain, & Lewin, 2013, p. 226); for example boys do not even face the threat of early marriage, harassment, safety & security whereas it is the main threat for a million of girls to leave school without completing the cycle (S. R. Nath et al., 2017; Yancey, 2015). Moreover, there are some places in Bangladesh, where the boy’s dropout is higher concerning the importance of “income-generating” possibilities (Sabates et al., 2013, p. 226). It indicates, despite some similarities in the causes of dropout, for example, poverty, school atmosphere, household responsibilities, government infrastructure for both boys and girls; girls belong to the special kind of features which result in the higher non-completion rate among them. According to Shahidul & Karim (2015) “Dropout rate does not occur through a single factor; it is a composition of several factors” (p. 26). The reasons for dropout are also not the same in all locations due to the differences in norms, cultures; nonetheless, the girls face persistent discriminatory practices (Colclough, Rose, & Tembon, 2000).

### **1.3 Justification of the study**

It is particularly important to complete the secondary school to fit into the competitive job market and make own self a potential citizen in the country betterment. Otherwise, the uneducated population will create a financial wastage in the country as a study reveals that there is 50% higher income comes from nine years schooling person rather than never going to school person; the income is even higher like 223% for a high school graduate rather than the primary graduate in Bangladesh (Ilon, 2000, p. 92). Not only in the sense of income but education also helps a person to utilize his full potential as it is said: “Education, as an element of human development, transforms an individual from a mere economic agent to a decision-maker and assures his well-being” (Karmakar, 2006, p. 1). This is the crucial time to find out the reasons and solve the problems of dropout in Bangladesh; because low enrolment creates low educational attainment in a country (Birdsall, Levine, & Ibrahim, 2005, p. 338). A country needs both male and female participation in education to achieve sustainable development.

Otherwise the cost of non-educating the girls will create a heavy burden on Bangladesh. Moreover, dropout is a continuous problem in the education system of Bangladesh which should be addressed properly because “The process of dropping out from school needs to be studied over time and be related to a number of possible determinants in order to understand its dynamics” (Sabates et al., 2013, p. 225) and those belong to the justification of this thesis.

## **1.4 Overview of the study**

This study tries to provide an overview from the literature context about the causes of girl's dropout at secondary school, suggested recommendations and taken intervention programs by the government, including national and international organizations. However, the study is mainly dependent on the literature from “Google Scholar” and from the other national, international database. This paper searches literature from 2000 to recent for the review analysis. To understand the rate of dropout, enrolment, completion, retention, efficiency rate, this paper studies data from the national database for education in Bangladesh (BANBEIS). The procedure of choosing literature is included in the methodology section. Significant numbers of analyses have been done to address the issue of dropout around the world. However, it is mainly the problem existing in the developing countries or least developed countries. But that does not conclude that dropout is not a problem for developed countries like USA. Because a study shows that 47% students from school quit school because of, not finding the classes interesting enough to stay in school and 38% leave school because they do not want to destroy freedom from their life by engaging in school rule in USA (Bridgeland, DiIulio Jr, & Morison, 2006, p. 3). European Union students also drop out due to the lack of financial support (Latif, Choudhary, & Hammayun, 2015, p. 1). There has been a lot of studies to find out the reasons or factors around dropout made on boys and girls in developing, developed, and least developed countries (Agustina, 2019; Boyle, Brock, Mace, & Sibbons, 2002; Latif et al., 2015; S. R. Nath et al., 2017; Song, Appleton, & Knight, 2006). In a study in Ethiopia, it is revealed that the enrolment decreases as the grade increases and the dropout is also higher for girls (Admassie, 2003, p. 171). The dropout issue has been discussed by several authors from several angles. Some contributes on household for example (Farah & Upadhyay, 2017; Hunt, 2008; Shahidul, 2013; Yancey, 2015), some contributes on socio-cultural for example (Arends-Kuenning & Amin, 2001; Chitrakar, 2009; Colclough et al., 2000; M. J. Grant & Hallman, 2008; Huq & Rahman, 2008; Pande, 2003; Shahidul, 2014; Suran, Amin, Huq, & Chowdury,

2004; Yancey, 2015), some contributes on economic factors for example (Boyle et al., 2002; Edmonds & Pavcnik, 2005; Ersado, 2005; Khanam, 2008; Latif et al., 2015; Yancey, 2015).

Empirical analysis in this paper, based on secondary data from the World development indicator and BANBEIS. This paper use data from 2008 to 2018, because a long time will provide an overview as well as actual causes for girl's pupil dropout at secondary school in Bangladesh. This paper estimated the causal correlation of girl's pupil school dropout at the secondary level with GDP per capita, child marriage. The dependent variable in this study is girl's pupil dropout at secondary school and the main independent variable is GDP per capita (income factor), child marriage.

## **1.5 Structure of the thesis**

This paper has eight chapters in a total of two sections. The **first chapter** is the introduction that provides extensive background on education worldwide before presenting the structure of Bangladesh's education system with a specific emphasis on the secondary level. **Chapter two** discusses the background, trend, and overview of the Bangladesh education system. **Chapter three** discusses a theoretical framework. In particular, the feminist theory is followed in the overall part of the thesis, but as a supporting of the chosen causes, the other theories are also discussed from the literature review context and thus comes the conceptual framework that is consists of the significant causes that enhance dropout especially for girls. **Chapter four** discusses methodological approaches used in the first section of this paper that is a systematic review of the literature. **Chapter five** summarizes the reasons for dropout from the literature context. **Chapter six** discusses the mixed literature findings, intervention, recommendations in the literature context. **Chapter seven** discusses the methodology, data description and results of the empirical analysis part. **Chapter eight** summarize all the findings from the literature context and data analysis part, including with recommendation, policy implications, make suggestions for further research and further concludes.

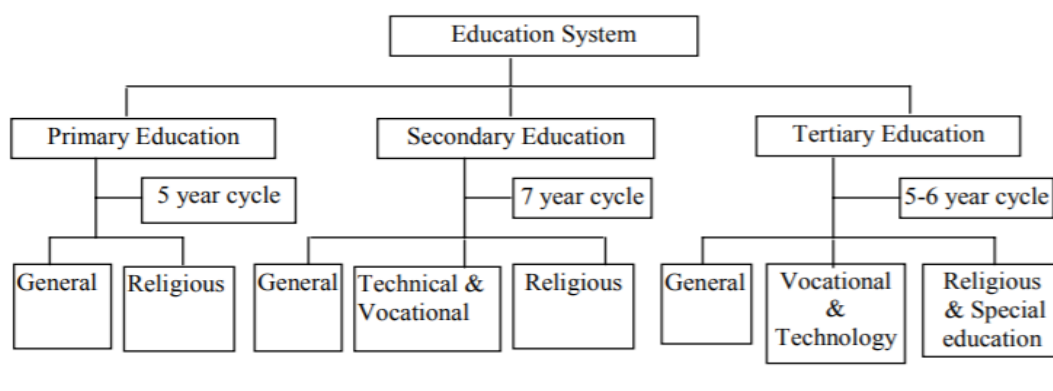
## **2. Background**

Bangladesh is situated in southern Asia and it has bordered by India in the west, north, and east and with Myanmar in Southeast. Bangladesh became an independent country in 1971 and this is the world's 8<sup>th</sup> most densely populated country in the world. The country has a lot of political, social, natural disaster upheaval after the liberation war. The education system has changed as the change of government and all the changes turn to increase the betterment of the population. "The education system of Bangladesh is continually undergoing reforms in order to meet the current and future needs and challenges of the socio-economic developments of the country" (Rahman et al., 2010, p. 122).

### **2.1 An overview of the education system in Bangladesh**

The constitution of Bangladesh in article 17 requires the government to provide free and compulsory education for all (Prodhan, 2016, p. 123); Bangladesh government thus take all monetary and non-monetary initiatives, frequently with the support of national and international organizations to achieve the goal of EFA that was promised with the World Education Forum by 2015 (Rahman et al., 2010, p. 115).

The Education system of Bangladesh comprises mainly of three levels. Primary, secondary and tertiary levels (Figure 1). The primary level begins from grade one and ends in class six. Primary education starts at age six, and this program duration is for five years (grade 1-5). The secondary education system comprises of three steps: Junior secondary (grade 6-8), secondary (grade 9-10) and higher secondary (grade 11-12). From the primary (grade 1-5) to the first steps of secondary (grade 6-8) the procedure and syllabus of study are the same. In the secondary level (grade 9-10) the students need to choose from three specializations: humanities, science, business studies. A student completes secondary and higher secondary to step into tertiary education.



*Figure 1. System of secondary education in Bangladesh*  
*Source: (Rahman et al., 2010, p. 125)*

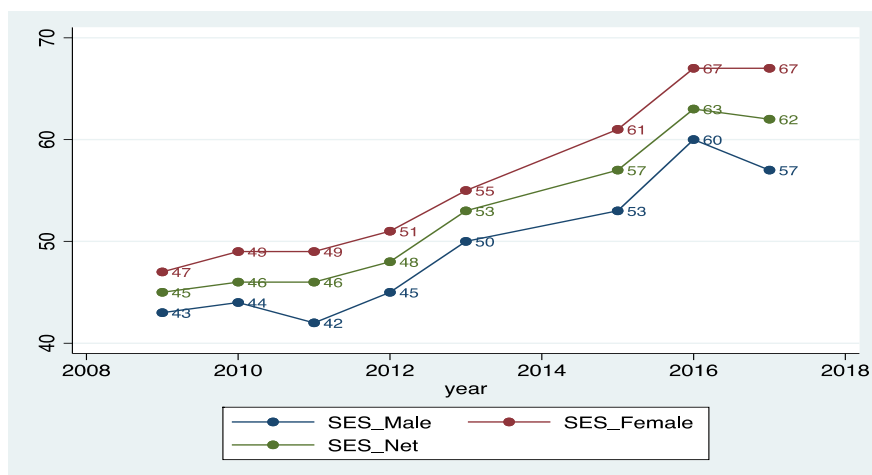
The below table shows the percentage of girl students at the secondary level for recent years.

**Table 1. Percentage of girl students at different levels of secondary education**  
 Source: (BANBEIS, 2018)

Level of Education	Percentage of girl student (2017)	Percentage of girl student (2018)
Junior Secondary (grade 6-8)	54.98	55.14
Secondary (grade 9-10)	51.82	51.65
Total secondary (grade 6-10)	53.96	53.99
Higher Secondary (Grade 11-12)	47.24	46.97

## 2.2 Trend of the enrolment of students at secondary school

Though Bangladesh is one of the least developed countries in the world (Rahman et al., 2010, p. 114), but it has made substantial progress in education from the last two decades (Huq & Rahman, 2008, p. 115). The net enrolment at the secondary level is in a favorable position for the girls.



*Figure 2. The trend for secondary school enrollment net (%) from 2008 to 2018*  
*Data Source: World Development Indicator (WDI)*

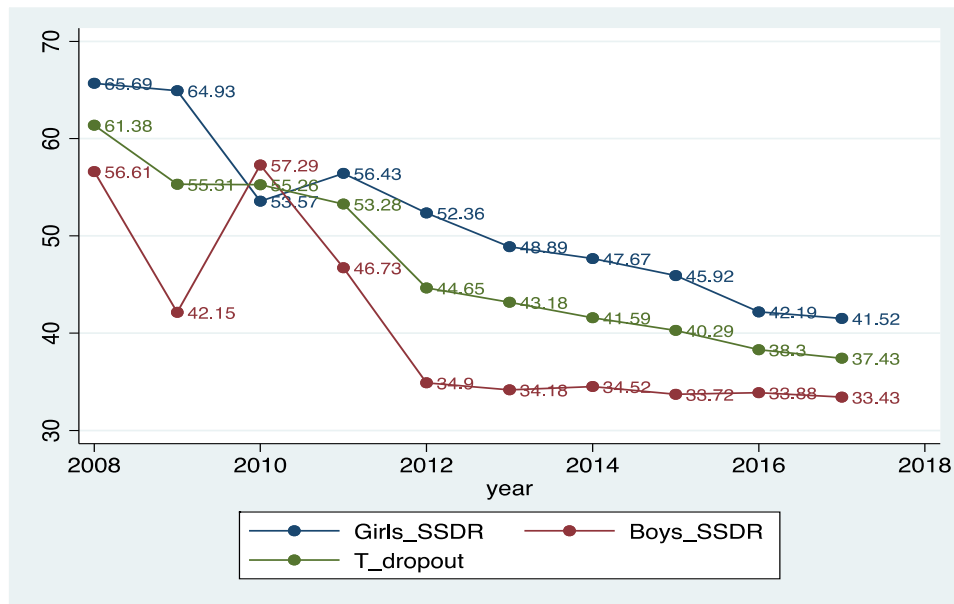
Figure 2 represents how secondary school enrollment, (%net) for male, female and net enrolment has changed over time. The vertical axis represents the net secondary school enrollment percentage and the horizontal axis represents the time period. The number of school enrollment, secondary, (%net) has an increasing trend since 2009. The net percentage of secondary school enrollment has an increasing tendency throughout the period. However, a still significant percentage (more than 30%) of pupils does not have the opportunity for school enrollment. It is urged to increase school enrollment to economic and human capital development. Gender disparity is also diminishing in the country that the number of girl's students is higher than the boys though it is not a surprising fact because Bangladesh government has implemented intervention programs to attract the parents of girl students; for example, Financial Stipend Program (FSP) at secondary level in a rural area, free textbooks to all secondary students, food for education in primary school (Huq & Rahman, 2008; S. R. Nath et al., 2017; Raynor et al., 2006). Non-Government Organization (NGO), International Funding Organization including with Bangladesh government, has worked together to achieve gender parity in primary and lower secondary that Bangladesh including the Maldives in South Asia is the only country to achieve gender parity (Chitrakar, 2009, p. 33).

### **2.3 Trend of the girl's pupil dropout at secondary education**

The rate of enrolment in primary and secondary levels in Bangladesh is satisfactory. Based on BANBEIS report, in some years the rate of enrolment is even higher for girls than boys. However, when it comes to the dropout issue, the girls are always in larger number than boys



at secondary level in Bangladesh (Yancey, 2015) and the girls' higher dropout rate is also prevalent in India (Bandyopadhyay & Subrahmanian, 2008) where these countries are almost similarly trying to retain girl students. "Despite the school-based and household incentive programs, Bangladesh's progress in improving secondary school completion rates has been far from satisfactory" (Sajeda Amin & Chandrasekhar, 2012, p. 26).



*Figure 3. The trend of the secondary school dropout rate*  
*Data Source: (BANBEIS, 2018)*

The above figure shows that secondary school dropouts for girls, boys and the combination of both genders from 2008 to 2018. Throughout the year there was a decreasing tendency for pupil's school dropout rate. However still, a significant rate of pupils, especially girls are dropping from secondary school. The dropout for girls was the highest (66.59%) in 2008 and the lowest (41.52%) in 2018. Figure 2 indicates that the enrolment of girls at the secondary level is increasing; however, figure 3 shows that still a significant dropout rate at the secondary level. While, the dropout rate is slowly decreasing, but it is still an alarming position. The differences in some specific reasons higher the dropout rate for girls than boys moreover, the value of education for girls is still not recognized by the society (Rihani, 2006, p. 17).

Bangladesh government has also plan for extending primary education to grade eight and make it compulsory for all as because the dropout mostly occurs in this grade (S. R. Nath et al., 2017, p. 35). A growing body of literature has shown that the most affected part of society is women. In any circumstances or any changes, the girls have to suffer more than the boys. It is essential

to set equity in the nation that one has not to be deprived at all the time because “equity for girls means equity for everyone” (Huq & Rahman, 2008, p. 122). Therefore, the study will try to provide an overview of the factors in a summarized way to support the reasons for the girl’s dropout.

### **3. Theoretical Framework**

This thesis is based on a review of the literature. Besides, the purpose of the thesis is identifying the causes of dropout at a secondary level, specifically for girls. So, the feminist approach comes hand in hand. As well as the factors discussed in the thesis also touches upon the school factors, home-based factors, socio-cultural factors, government infrastructure factor that is why the institutional theory, human capital theory, household production theory will also be discussed here that are available from the literature review. Moreover, in this paper, the theory of feminism is followed from the perspectives of liberal and radical feminism theories.

#### **3.1 Institutional theory**

The institutional theory was developed by Vincent Tinto in 1987 for understanding the departure pattern of the college students based on the work of Emile Durkheim and Arnold Van Gennep (Tinto, 1987). This theory was first concerning on personal factors of a student for enrolling after that two dimensions: “social” and “academic” of that institution both “formal” and “informal” perspectives were considered how to hold that enrolled students (Rumberger & Lim, 2008, p. 9). These two dimensions are independent that they do not affect each other in the consideration of remaining in school; moreover, this theory also discusses “student mobility” in three angles (Rumberger & Lim, 2008, p. 10).

This institutional theory was also further developed addressing two perspectives “institution” and “individual” by (Rumberger, 2004). In his theory, he focuses on the school structure that influences school dropout; and it is particularly important that the size, resources, and quality of school increase or decrease the dropout of students (Fortin, Marcotte, Diallo, Potvin, & Royer, 2013; Hanushek, Lavy, & Hitomi, 2008; Werblow & Duesbery, 2009). The individual perspective is also important to consider because a student’s background and condition in school have a strong relation with dropout (Rumberger, 2004).

Household Production model developed consequently by Becker in 1965, Detray in 1973, Rosenzweig and Evenson in 1977 which are focusing on multiple activities of children in developing countries and based on this Khanam (2008), makes a “general utility-maximizing framework” in her paper to find out the relation between children’s’ schooling and work on the

basis of “household”, “individual”, “parental”, “community” characteristics (Khanam, 2008, p. 79).

### **3.2 Human Capital theory**

Adam Smith in 1776 innovated this theory. In his book “The Wealth of Nations” the human treated as capital if educated and trained properly. “Education, in particular, female education has a positive linkage with human development” (Karmakar, 2006, p. 5). Human development is only possible through education. The human capital theory also suggests that schooling will be started at the earliest age (Gira, 2001, p. 1). Thus, late enrolment and dropout in education will necessarily decrease the number of skilled, technical, educated people from the society and job market. The development of a society and country depends on the efficient labor market which is the outcome of educated people in the country. It is not only about focusing more on the girls’ education and incentives, rather creating a more equitable position for both boys and girls that the society gets balanced development from them (Huq & Rahman, 2008, p. 122). Child labor has a positive relation to dropout. So, if dropout increases in the country it also indicates the increasing number of child labor including other aspects. This thesis work is based on female dropout, but the theory is based on the overall development of a society, where female participation is mostly needed for a country like Bangladesh. Because the additional schooling of female increases the productivity and sustained economy in the country as well as the female can be part of decision-making process in a family which are broadly discussed in the later of the review part. Dropout from education at a higher level decreases the employment opportunity of women in Bangladesh (Shilpi, Hasnayan, Ilahi, Parvin, & Sultana, 2017). In addition, their survey showed that among 54,209,000 working-age women population there is 16,846,000 women were employed only (p. 47). For this reason, to have an efficient labor market in Bangladesh girls should be educated, trained, skilled adequately in compliance with boys to reap the benefit of sustained growth. So, the implication of this theory is particularly important for Bangladesh.

### **3.3 Liberal feminism theory and radical feminism theory**

Liberal feminism theory and radical feminism theory are applicable to this paper. Specifically, equal access of women and men in education and employment is the main theme of the liberal feminism theory. In the later part of this paper, it is broadly discussed how women are losing

their access to education, family, employment for not being educated. Thus, it is important to restrain from the dropout and retain the female students in the school for assuring the way of equal opportunities open for them. The job market is also dominated by the male that all the important and high salaried job are occupied by men since women are not much educated or skilled or sometimes do not get equal opportunity in accessing job that the study reveals that only 29% women engage in good occupation whereas the rate is 71% for the male in Bangladesh (Shilpi et al., 2017, p. 48). Furthermore, the radical feminism theory, which is based on denying the gendered social structure, is considered in the thesis work. The patriarchal practices in Bangladesh are related to many of the decisions about women regarding education, employment, sex, expenditure, number of children, etc. which are broadly discuss in the review part. An increase in education decreases domestic violence for women in Bangladesh (Shilpi et al., 2017). The study reveals that primary educated women face much more violence in the home rather than the upper secondary or higher secondary educated women (p. 46). Thus, the thesis is guided both by the liberal feminism theory and radical feminism theory because society needs equity from the equal development of men and women. So, depriving the women in education, employment, family through the generations practised patriarchal culture which aims for benefiting the boys only, will not necessarily give the nation a positive outcome.

### 3.4 Conceptual Framework

In the study of literature, it is observable that the conceptual part is consisting of determining the dependent variable and the independent variable of the problem. The independent variables are myriad based on the nature of that study area. The dependent variable is a dropout. Some of the examples from the review of literature how the authors identified and named the independent variable are following here:

**Table 2. Main causes for girl's pupil dropout at secondary school**

Causes	Literature
Schooling cost	(Admassie, 2003; Nekatibeb, 2002; Prodhan, 2016; Sabates et al., 2013; Shahidul & Karim, 2015; Yancey, 2015)
Parental investment	(Leung & Zhang, 2008; S. R. Nath et al., 2017; Nekatibeb, 2002; Sabates et al., 2013; Shahidul & Karim, 2015; Yancey, 2015)

Child marriage and pregnancy	(Amadi, Role, & Makewa, 2013; G. Brown, 2013; Chitrakar, 2009; M. J. Grant & Hallman, 2008; Mahmud & Amin, 2006; S. R. Nath et al., 2017; Nekatibeb, 2002; Noori, 2017; Rihani, 2006; Sabates et al., 2013; Schurmann, 2009; Shafique, 2013; Shilpi et al., 2017; Tuwor & Sossou, 2008; Yancey, 2015)
Poverty	(Chitrakar, 2009; Hunt, 2008; Khanam, 2008; Latif et al., 2015; Lewin & Sabates, 2012; Mahmud & Amin, 2006; S. R. Nath et al., 2017; Nekatibeb, 2002; Noori, 2017; Schurmann, 2009; Shafique, 2013; Yancey, 2015)
Government and school infrastructure and corruption	(Colclough et al., 2000; Nekatibeb, 2002; Noori, 2017; Prodhon, 2016; Rihani, 2006; Yancey, 2015)
School Distance	(Admassie, 2003; Chitrakar, 2009; Colclough et al., 2000; Latif et al., 2015; S. R. Nath et al., 2017; Rihani, 2006; Shafique, 2013; Yancey, 2015)
Child health	(Alderman, Behrman, Lavy, & Menon, 2001; Amadi et al., 2013; Behrman, 2006; Grira, 2001; Latif et al., 2015; Sabates et al., 2013)
Gender disparity	(Colclough et al., 2000; Nekatibeb, 2002; Noori, 2017; Rihani, 2006; Sabates et al., 2013; Song et al., 2006; Tuwor & Sossou, 2008)
Disability	(Filmer, 2008; Hunt, 2008; Sabates et al., 2013)
Household work	(Admassie, 2003; Nekatibeb, 2002; Sabates et al., 2013; Song et al., 2006; Tuwor & Sossou, 2008)
Parental involvement	(Admassie, 2003; Rihani, 2006; Sabates et al., 2013)
Parental education	(Amadi et al., 2013; Behrman, 2006; Birdsall et al., 2005; Latif et al., 2015; Nekatibeb, 2002; Rihani, 2006; Sabates et al., 2013; Shafique, 2013)
Age	(Lewin & Sabates, 2012; Momo, Cabus, De Witte, & Groot, 2019; S. R. Nath et al., 2017; Sabates et al., 2013)
Lack of teachers especially female teachers	(Amadi et al., 2013; Asadullah & Chaudhury, 2010; Latif et al., 2015; Noori, 2017; Shafique, 2013)

Harassment

(S. R. Nath et al., 2017; Nekatibeb, 2002; Noori, 2017; Rihani, 2006; Shafique, 2013; Yancey, 2015)

Based on the literature review above table has summarized the main reasons for girl's dropout. This table has helped the author of this paper to set a conceptual framework consisting of the important causes that are specifically liable for girls' dropout. As discussed earlier the reasons for dropout have some similarities between boys and girls but girls possess some unique features that enhance the dropout among them most. That is why the features keeping in mind this paper has set the conceptual framework which can help the researcher for further research.



*Figure 4. Conceptual framework of school dropout*  
*Source: The Author herself*

## **Section I - Literature review analysis on the causes of dropout**



## **4. Methodology**

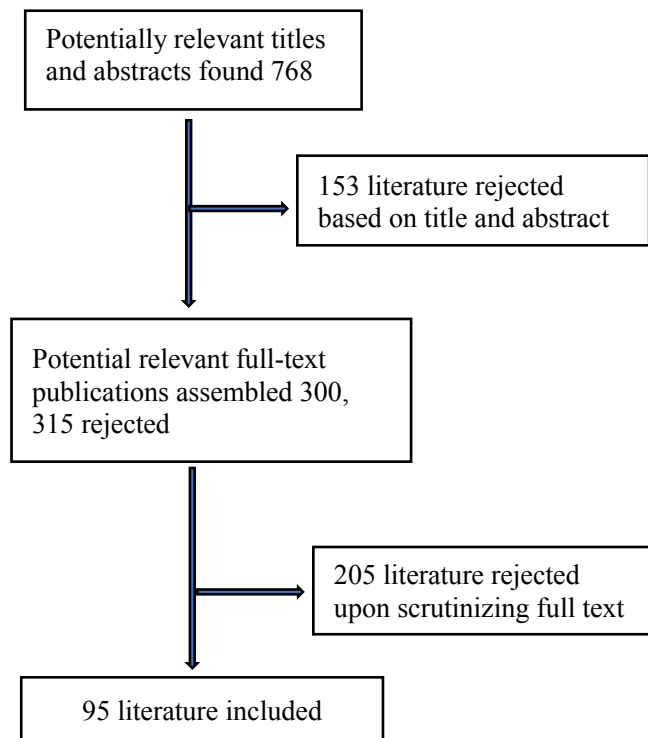
### **4.1 Literature search**

To identify the causes of girl's dropout at secondary school in Bangladesh, this paper assessed an in-depth analysis of the literature review following a systematic approach. Google Scholar used for the citations and literature search from the period 2000 to recent. At the initial stage primary school, secondary school, dropout, the completion rate was searched for Bangladesh to have an idea on the theme from the educational database of Bangladesh BANBEIS. After that, to have a holistic view of these factors developing countries database searched through the website of UNESCO, UNICEF, World Bank. The process of choosing literature is following in table 3 and figure 5. That helps to search for the keywords 'school dropout', 'secondary school dropout', 'child marriage', 'early school leaving', 'determinant of school dropout', 'pregnancy', 'school distance', 'nutrition', 'gender disparity', 'age', 'child labour', 'poverty', 'household decision', 'natural disaster', 'school factors' etc. References found in the literature were also searched if found relevant. The qualitative method-based literature was searched first to get an in-depth view of the problem. The literature included both national and international publications to get a better understanding and to support the causes that are existing in Bangladesh. "However, girls face an elevated risk of dropping out, especially around the transition from lower to upper secondary. Many of the same pressures that shape primary education progression patterns apply at the secondary level, with poverty, early marriage, and problems in the quality of education contributing to high rates of attrition" (G. Brown, 2013, p. 7). In that sense, the primary school-based literature is also studied. The thesis paper is guided a little bit by (Cardenas-Denham, 2007; Hunt, 2008; Momo et al., 2019; Shahidul & Karim, 2015). The literature retrieved were limited to English languages only. The search of literature also helps the author to set the name of the causes under five main headings. In the first section of the paper, qualitative aspects of literature are carried out mostly, including the important quantitative literature, and there is also presented a summary table of the findings from the mixed studies afterwards. However, empirical analysis, along with the methodology and statistical presentation, is discussed in the second section of this thesis paper.

**Table 3. Description of search terms and literature search**

Category	Search terms	Literature Retrieved	The literature selected for this review
Girl's secondary school dropout in Bangladesh	<Girl's secondary school dropout> or <secondary school dropout in Bangladesh>	17,700	33
Child marriage in Bangladesh	<Child marriage Bangladesh> or <secondary school dropout for child marriage in Bangladesh>	21,200	7
Household in Bangladesh	<Household Bangladesh> or <secondary school dropout for household in Bangladesh>	25,700	6
Poverty in Bangladesh	<Poverty Bangladesh> or <secondary school dropout for poverty in Bangladesh>	26,500	14
School factors in Bangladesh	<School factors Bangladesh> or <secondary school dropout for school factor in Bangladesh>	26,100	12
Political factors in Bangladesh	<Political factors Bangladesh> or <secondary school dropout for political factor in Bangladesh>	23,600	7
Socio-cultural factor in Bangladesh	<Socio-cultural factor Bangladesh> or <secondary school dropout for socio-cultural factor in Bangladesh>	23,100	16

Thus, the literature search comes into the following summary of taken literature:



*Figure 5. Flowchart of the search strategy to identify literature*

## **4.2 Methods used in the literature**

The thesis paper tries to cover the literature based on different approaches at its best. The literature some have quantitative (Admassie, 2003; Amadi et al., 2013; P. H. Brown & Park, 2002; Ersado, 2005; Hove, 2007; Huq & Rahman, 2008; Khanam, 2008; S. R. Nath et al., 2017; Shahidul, 2013; Shilpi et al., 2017), some case have qualitative and some have both in their methodology parts (Boyle et al., 2002; Colclough et al., 2000; S. R. Nath et al., 2017; Nekatibeb, 2002; Yancey, 2015). The qualitative methods using works of literature provide an in-depth idea of the problem dropout, by associating other related factors to it, on the other hand, quantitative method works on large number sample to get more access with the specific numerical value of the factors (Momo et al., 2019, p. 7).

## **5 Factors influence on girl pupil's dropout**

### **5.1 Socio-Cultural Factor**

In a country like Bangladesh, the socio-cultural barrier works as the most influential factor for girl's school dropout. A growing body of literature has admitted that child marriage, including social obstruction, gender disparity, religious belief, and other factors often hinders the education process of a girl. The most prevalent causes under socio-cultural factors discussed below:

#### **5.1.1 Child Marriage**

According to Bangladesh's Child Marriage Restraint Act 1930, a male is considered as a child when is under twenty-one and for the female age is under eighteen and marriage before these ages are considered as a child marriage which is punishable offence (Yancey, 2015, p. 73). This is considered an inevitable part of society to see a girl married whether the age may not be correct by the law. It is not only a particular problem in Bangladesh, but the other low-income countries are also practising child marriage which is creating girl's dropout (Dunne et al., 2005; M. J. Grant & Hallman, 2008).

The child marriage is one of the vital and strong factors of girl's drop out in Bangladesh (G. Brown, 2013; Huq & Rahman, 2008; Lloyd, 2005; Mahmud & Amin, 2006; S. R. Nath et al., 2017; Shahidul & Karim, 2015; Shilpi et al., 2017; Yancey, 2015). "In Bangladesh, as in other countries, child marriage is rooted in a complex interaction between social, cultural, and economic factors" (G. Brown, 2013, p. 26). The child marriage rate and level of educational attainment are interconnected to each other to define the quality of a girl's life because there are so many associated factors with this child marriage (Yancey, 2015, p. 56).

The aftereffect of marriage is pregnancy which is also one of the important factors to drop out. A study in South Africa tried to find out the relationship between dropout and pregnancy (M. J. Grant & Hallman, 2008). They found a strong relation between them that pregnancy makes the young girls unable to continue their education. It is also prevalent in Bangladesh that the author mentioned "Early pregnancy and childbirth due to child marriage act to limit education opportunities and often lead to health complications" (G. Brown, 2013, p. 25). In the early age

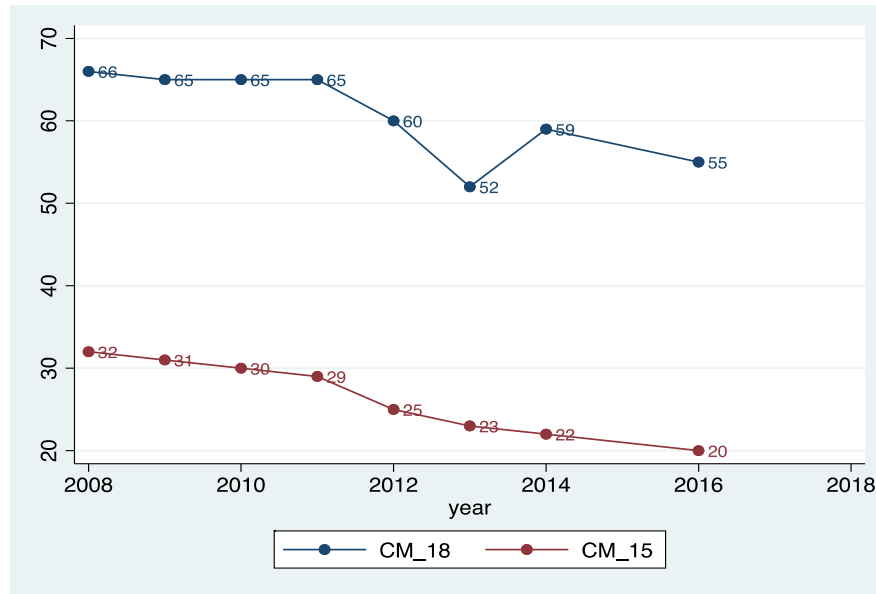
of pregnancy not only increase the dropout in Bangladesh but also create a strong physical problem in the adolescent and their children if they alive discussed by (Yancey, 2015, p. 60). Whereas, Yancey (2015), shows that, the born children from this adolescent have several health problems in the early and after age which requires long-term treatment for both mother and baby. Early marriage and dropout relations are similar to “push and pull factors” that one another results for each other (G. Brown, 2013, p. 26). By ending child marriage, Bangladesh can create an additional \$ 4.58 billion money in the economy by increasing women’s productivity (Wodon et al., 2017, p. 62).

A study in Bangladesh found that 35.8% of dropout occurred due to child marriage and that is why they found it the most prominent reason for dropout in their survey (S. R. Nath et al., 2017, p. 45). Child marriage is one of the important causes of dropout particularly prevalent for females, which is absent in the male, but about 55.7% male dropout only for no interest in study whereas the rate is only 10% for the female (see appendix one) (p. 46). This also found from that study, almost 96% of marriage occurs before 18, which is the legal age for marriage and the highest marriage occurs at the age of 15 years and 14 years respectively (see appendix two). That study also reveals that dropped out but unmarried 22.6%, married after dropping out 28.2% and dropped out for marriage is 49.2% (p. 47); as well as food security status also increase the early marriage and dropout in secondary education (p. 48).

Poverty creates child marriage in the least developed countries like Bangladesh, found in the study of (Yancey, 2015). Also added that, girls as an “economic risk” to their parents that they like to marry them off instead of educating them and use scarce resources to the other children especially boys. And after getting married, only a few numbers of girls can continue school (Mahmud & Amin, 2006). Not only for dropout, but child marriage is also responsible for creating home violence to child death (Yancey, 2015, p. 59), but still now it is considered as one of the normal and practiced social norms in Bangladesh. Child marriage is a problem in every way in developing countries starting from human rights violation as UN declare that childhood right of everyone should enjoy regardless any factor under the year of 18 (Yancey, 2015, p. 58). Added that, other than mental, physical pressure child marriage takes away from a girl her happiness of childhood, the excitement of life, pleasure as well as her underdeveloped body and becomes more vulnerable when she gets pregnant and gives birth. Furthermore, the consequences are also heavy for girls another way like a study in India reveals that, marry

before 18 creates problems in sexual and reproductive health including the violation of human rights (Basha, 2016, p. 24).

Parents often consider “custom of dowry” and “female hypergamy” at the “marriage market” in Bangladesh (Shahidul, 2014, p. 710). These tendencies deter girl’s educational outcome because parents take into their consideration of these issues when deciding their daughter’s education (Shahidul, 2014, p. 714). He also discussed that the dowry that is given to the groom at the wedding from the bride’s parents is depending on the bride’s level of education. Because in that case when the bride is educated, the groom will be more educated than eventually increase the amount of dowry. He also added that parents also think about hypergamy which is also creating dowry inflation as well as lessening their daughter’s year of schooling. “In a setting like Bangladesh where traditional customs are strong, adolescent marriages raise the opportunity cost of educating girls” (S. R. Nath et al., 2017, p. 9). Yancey (2015), also contribute towards it that the society, neighbours, family members always keep telling that dowry is increasing as increasing the daughter’s age and education. This similarity was also found by the authors that amount of dowry increases or decreases with the level of their daughter’s age (G. Brown, 2013; S. R. Nath et al., 2017) . “Marriage and dowry considerations continue to be important considerations in decisions on when to end a girl’s schooling” (Sajeda Amin & Chandrasekhar, 2012, p. 26). Though the parents think dowry will secure their daughter’s life after marriage but in reality it is not because in the study of (Yancey, 2015), found that 50% of the interviewed married girls face physical and mental violence from their in-laws family and especially from husband (p. 61); but this true fact cannot stop the child marriage in Bangladesh. In the same study, the most painful issue carried out that girls take the way to commit suicide when she cannot stop her family to get married. She starts to think she has no hope left for education and upcoming home, physical violence will definitely destroy her life, so it’s better to pass away from all of these (p. 62). “In addition, the fact that dowry has been illegal in Bangladesh since the Dowry Prohibition Act of 1980 contributes further to keeping the practice fluid and vague” (Suran et al., 2004, p. 7). Moreover, parents who pay dowry at their daughters’ marriage has more likely to face domestic violence rather than the daughters whose parents don’t give any dowry at their marriage (Suran et al., 2004). Another reason for continuing the practice of dowry is unemployment of male members, in a belief that husband will bear all the expense of wife in future so it is normal to get some financial benefits from groom’s family found in the study of (Yancey, 2015).



*Figure 6. Child marriage by age 18 and by age 15 (% of women ages 20-24)*  
*Data Source: World Development Indicator (WDI)*

The above figure indicates how child marriage by age 15 and 18 has changed over time. Child marriage by age 18 decreased from 66% to 55% from 2008 to 2018. Also, there was a slightly slower decreasing trend in child marriage by age 15 for the same time period. However, still, a significant number of girls have been involving with child marriage.

Several incentives have taken to stop early marriage as well as lowering fertility, for example, taking sign from parents that they will not marry their daughters until 18 to get the incentives like food, free tuition, cash for education, etc but yet really cannot stop the early marriage (Sajeda Amin & Chandrasekhar, 2012, p. 26). The government has also introduced Female Stipend Program (FSP) at the secondary level that increases the enrolment, but parents often like to marry off their daughters before completing secondary school (Huq & Rahman, 2008, p. 116). It is also included in the Sustainable Development Goals to end child marriage (Wodon et al., 2017, p. 12). But the law and goal could not stop child marriage in Bangladesh. The family and social norms are so powerful that child marriage is still widespread and encouraging drop out as well. Bangladesh is in the fourth position after the countries of Africa: Chad, Mali, Niger in child marriage (UNICEF, 2011). Now, this is the time to think about the economic losses incurred by the child marriage and take initiatives to stop it to achieve the SDG as well as the economic benefit of a country (Wodon et al., 2017).

It is important to stop child marriage because it is considered as one of the main barriers of girl's education particularly in the secondary level, because most of the marriages occur at this age when the girl might be engaged with her education and prepare her for better future.

### **5.1.2 Social obstruction**

The education practice for girls is often defined by social norms (Tuwor & Sossou, 2008). In addition, social obstruction instigates parents and daughter to leave school education earlier in Bangladesh (S. R. Nath et al., 2017). Also added that it looks very uncomfortable when the girl comes into "puberty" but not yet get married in society. Society takes a pubertal girl often engage in a relationship due to her physical and mental change which does not take easily in society. So, the parents feel safe to marry their daughters at this age (p. 48).

Harassment is also another reason to dropout (Nekatibeb, 2002; Noori, 2017; Rihani, 2006; Yancey, 2015). In the context of Bangladesh, a teenage girl often faces this harassment on the way to school that makes her bound not to attain in school because social pride is considered more important to parents than educating their daughters (S. R. Nath et al., 2017, p. 48). On the other hand, social obstruction is even at this stage that parents often fear about the perception and gossip about their daughters from society while take a long distance to go school; the society creates a rumor of her puberty and illegal relation make bound to the parents to create drop out found in the study of (Yancey, 2015, p. 64). The author also added that the parents start to think this defame will increase the amount of dowry as well as they will not get any good groom for their daughter. It is the parent's duty to keep the daughter safe from illegal sexual violence and as a safeguard the daughters become a bride that enhances the dropout founded in the same study.

Cultural belief sometimes becomes a social obstruction in developing and religious countries for the girls to stop their schooling (Agustina, 2019; Asadullah & Chaudhury, 2010). "Religious beliefs discourage parents from sending their daughters outside their home after a certain age" (Khanam, 2008, p. 83). Menstrual hygiene (often treated as an obstruction) is important for the adolescent in the sense that, a school-based intervention program in Bangladesh regarding hygiene processes find out that, there is an increase of knowledge from 51% to 82.4% among those who attend this intervention program; when the adolescents get the



knowledge around the menstrual hygiene process (Haque, Rahman, Itsuko, Mutahara, & Sakisaka, 2014, p. 5).

### **5.1.3 Gender Disparity**

“The relationship between gender and education is complex and dynamic” (Huq & Rahman, 2008, p. 121). Gender disparity in education is a common problem in South Asia. “Gender parity remains an even more elusive goal at the secondary level (particularly upper secondary) in many developing countries, although there has been significant progress over the last 15 years” (Rihani, 2006, p. 14). Parents in south Asia feel it more worthy spending on boy’s education to get a financial return from them in a later period of their lives (Chandrasekhar & Mukhopadhyay, 2006). “In Bangladesh, although gender roles are largely determined by culture, religious ideologies are often exploited to suit traditional culture and norms” (Asadullah & Chaudhury, 2010, p. 215).

Bangladesh achieved gender parity at enrolment in 2005, whereas the disparity was double in 1970 at the time of independence (Sajeda Amin & Chandrasekhar, 2012, p. 25). The same study reveals that the female to male ratio of gross enrolment has increased to 0.39 to 1.05 between 1970 to 2005 (p. 25). Bangladesh has also achieved gender parity in primary and secondary but the grade eight in secondary treated as the most dropout occurring grade from the study of (S. R. Nath et al., 2017, p. viii). Bangladesh is trying to lessen the gender gap by creating several programs, for example, Female Stipend Program (FSP) in the secondary level, school infrastructure facilities, an increasing number of female teachers, etc. and thus, creating satisfactory and increasing secondary enrolment in Bangladesh (Huq & Rahman, 2008). But the dropout and SSC result is still very disappointing for girls at the secondary level founded in the study from the same authors (p. 121). The reasons thought by the critics in this paper revealed that girls with the help of dishonest school clerks only enjoy the stipend but do not maintain the rules of study for getting the stipend. Thus, the poor result in the board exam of girl’s creates dropout as well as increasing the gender gap in the further step of education.

A study in Africa revealed that the student’s priority over choosing a profession is often gendered, and teachers often decide which job is suitable for girls and which is suitable for boys (Kane, 2004). A study in rural China, the authors describe the girls’ education as a “luxury

good” and “income elastic good” (Song et al., 2006, p. 1639). That study also found that maternal education has a rather strong voice for enrolling primary schools rather than secondary schools for girls; considering the potential income benefits from the boys (p. 1639).

#### **5.1.4 Age**

Age is an important factor to drop out. “Grade repetition and late enrolment cause the child to be over the age-in-grade appropriate” (Sabates et al., 2013, p. 227). Noted that, their studies do not found the dropout is a problem for lower grade and overage children; rather it is a problem for overage children in the higher grade (p. 230). Additionally, overage has also a significant problem on children because it increases their “opportunity cost” of schooling, also the older girl’s children, face more the threat of “safety”, “marriage”, “teenage pregnancy” that consequences in dropout (p. 227). Moreover, in a study, it is revealed that “Our estimates suggest that the impact of child’s weight-for-age which is a combination of height-for-age and weight-for-height is strong and appears as the best predictor of whether or not the child was enrolled in school” (Girra, 2001, p. 14).

“Age is a very important determinant since an additional year is associated with an increase of 60% in the likelihood of dropping out” (Sabates et al., 2013, p. 230). Age of 15 years is supposed to be the standard age to complete secondary, whereas in the earlier it was shown that most of the marriage occurs in this age (S. R. Nath et al., 2017). The number of children is also an important issue for parents to think about which child should go for drop out (Boyle et al., 2002), whereas age is one of the priorities. The additional daughter also increases the dropout rate by 6.4% found in the study (Farah & Upadhyay, 2017, p. 14). That study also reveals that the specific age group of the household head influences dropout. For example, 75 years older household head family has a greater influence on dropout like 42% than the age group 15 to 34 years old. The authors make a hypothesis that young parents tend to educate their own children more in order to eradicate their parents (school going children’s grandparents) mistakes (p. 14). The authors reveal an interesting relationship in their study between age and dropout in entering the secondary level (S. R. Nath et al., 2017). The increases of age are also increasing the dropout except year 11 which is considered the perfect age for entering grade six at the secondary level (p. 42). Another study reveals that, the age of puberty is very critical for a girl because at this age the society and family members start to believe that it is the best time for a girl to understand the marital responsibilities as a mother, wife, daughter

in law (Yancey, 2015, p. 58); which is ultimately higher the dropout rate. Yancey (2015) has also discussed in the study that in the eye of society this younger age is very good to marry girls because in this age they are not much “resistant” and look more “attractive” (p. 68) and thus creating dropout of girls at this age much.

## **5.2 Economic factors**

Bangladesh is bestowed with the problem of low economic conditions countrywide. Poverty is considered a nexus where all the problems are carried out. Dropout from education is not different from that. A growing body of literature has admitted that when a family faces a financial crisis, the impact heavily affects the girls. The early dropout, early marriage, household responsibilities, child labor all are linked with the poor economic condition of the country. The below discussion goes through the path of discussing economic factors, poverty, and other related causes that create the financial inability for parents to continue their girl’s education.

### **5.2.1 Income and Economic Condition**

Family income has a significant influence on determining the children’s attainment and continuation in school (Hadley, 2010). In a study, the household income was found as one of the most important determinants of dropout where the authors mentioned, “Interestingly for income, we found that both the level of income and income growth reduce the likelihood of school dropout (by 33 and 65%, respectively)” (Sabates et al., 2013, p. 230). The household class in Bangladesh is divided into five classes “poorest”, “poorer”, “middle”, “richer”, “richest” and among the five classes, the authors find the richer and richest have a significant negative effect on dropout (Farah & Upadhyay, 2017, p. 14). The similarity that the rich family’s children continue the school rather than the poor also found out from the study of (Birdsall et al., 2005; Boyle et al., 2002). Not only that, but the increasing number of household members also influence the drop out due to the extreme financial pressure on the household head (Colclough et al., 2000). Parent’s level of education also makes vulnerable the economic condition of a family and thus create dropout found in the study of (Yancey, 2015). Thus, parents with poor educational backgrounds could not get a good job and salary to support their families well and find it easy to get their daughters married by bringing them outside of school.

If the household head is employed in a non-fixed job there is a high probability that children will combine both “work” and “study” (Khanam, 2008, p. 96). Moreover, sometimes the negative changes in income jeopardize the already existing school going children which eventually creates dropout (Kane, 2004).

The economic condition mostly hinders the male’s education at the secondary level because they considered the source of earning money in the family and parents think earning a livelihood is important than education (S. R. Nath et al., 2017). The same thing also pronounced by (Yancey, 2015), that economic condition affects both males and females, especially male because they have to participate in the family income by doing any kind of job. Young boys have a low scope to enter into the secondary level that they have to take the family responsibility by entering into the labor market (G. Brown, 2013, p. 7). Therefore, the reverse opinion comes from the other author, “In Bangladesh, girls have much to do at home, particularly if they come from families surviving in an acute subsistence economy. Girl’s from such families are often needed at home and/or they are required to work to supplement the subsistence family economy” (Chitrakar, 2009, p. 34).

### **5.2.2 Parental Investment and Involvement**

“Parental investment for children's well-being can sometimes become gender-biased” (Shahidul & Karim, 2015, p. 26). Most of the developing countries like Bangladesh and China, parents like to use their resources to make their sons educated (Huq & Rahman, 2008; Song et al., 2006). Although the “direct cost” is the same for boys and girls parents preference for expense goes for boys (Shahidul & Karim, 2015, p. 26). Not only that, even in children’s health issue, the sons get more preference in India (Pande, 2003). Parents are more willing to pay for boys to secure their future wellbeing security (Leung & Zhang, 2008).

It is important that the parents understand the forthcoming benefits of educating their daughters (Ananga, 2011). If it is possible to make the parents understand that one year of more schooling increase the growth rate two to four percent per year in GDP; as well as the educated female can contribute in alleviating poverty by her self-employment (Karmakar, 2006), then maybe the parental investment will turn into their daughters.

Parental involvement in education helps a lot to reduce the dropout; reveals in the study carried out by (Yancey, 2015). Furthermore, the author shows a negative relationship between the new concept of parental involvement and dropout. Additionally, this is the significant problem in low-income family that the parents must stay outside for work to bear the expenses of children's education and thus cannot attend the school activities organized by the school committee which is helping to create dropout that students feel themselves unimportant in the eyes of their parents founded in the same study. Parental involvement is necessary for their children to make them interested and succeed in their studies (Jeynes, 2007). More parental involvement ensures more progress from children in education but "Unfortunately, not all parents are engaged with their children's education" (Sabates et al., 2013, p. 226). That is why Bangladesh government has also introduced a home-school relationship in 1977 through the Secondary School Management Committee (Yancey, 2015). When the student's dropout, School Management Committee (SMC) with relatives and teachers try to persuade the parents to send their children to school again (S. R. Nath et al., 2017, p. 52). It is particularly important because the study reveals that, parents who have contact with teachers have less number of dropout children as well as parental support in homework, interest, and involvement in children's education are important determinants of whether their children will continue schooling or not (Sabates et al., 2013). Particularly for girls, parental involvement is necessary to improve their present situation and bring them back to education (Yancey, 2015).

### **5.2.3 Schooling Costs**

"The direct and indirect costs of schooling can exclude some children from school" (Sabates et al., 2013, p. 226). This argument is also supported by (Karim, Rodall, & Mendoza, 2004; Shahidul & Karim, 2015). It is revealed from several studies Worldwide that, schooling costs effect more on girls due to the parents' attitude of preference towards their boys (P. H. Brown & Park, 2002; Shovan & Susmita, 2012). This finding is also supported by another literatures that, "Schooling costs are sometimes linked to the gender of the children as parents sometimes become unwilling to pay schooling fees for their daughters" (Shahidul & Karim, 2015, p. 26).

This summary is largely taken from Yancey (2015). The related cost (government exam fees, tutor cost, purchase of accessory goods) in the secondary level of education is so high that parents often cannot afford those necessities. Especially in the board exam fee feels relatively

higher to parents that they feel it is wise to get married off the daughters before enrolling in the board exam and sometimes students being failed in the board exam create drop out because it is impossible for parents to bear the cost again. The guidebook is becoming an important substitute for a textbook which is recommended by teachers as well as private tutoring is extremely practised in Bangladesh that 100% girls in his study take tutor to understand the study easily (p. 41). The consequence of this malpractices is that poor families cannot afford it all the time and that deter the students to go school, whereas the other students from wealthy families are taking this advantage; thus, creating a significant dropout (p. 41). Government stipend is also not much enough to afford these guide book and tutor costs that eventually create dropout.

This similarity also found in the study of (S. R. Nath et al., 2017). That guide book and private tutor cost are so much that often make it unable for students to continue their education. Teachers often suggest students get them as private tutors and to buy a guidebook from a specific publisher to understand the text easily instead of giving a lesson to the students properly in the class. In addition, also noted that around 20.2% female students drop out of the study because their families cannot afford the education cost (p. 46).

The indirect costs of schooling are sometimes even much expensive that many of the poor families in Africa cannot afford the cost and that becomes the main reason to dropout (Ananga, 2011; Lewin & Sabates, 2012); hence, there is positive relation of increasing schooling cost and scarce resources with girls' dropout (Nekatibeb, 2002).

#### **5.2.4 Poverty**

“Household poverty and the wider human development shortfalls exercise a powerful influence on the distribution of opportunities for education.” (G. Brown, 2013, p. 18). The cornerstones of poverty are often unpredictable; for example, climate change can make people landless, homeless and leave them uneducated, heavy wastage in a country like Bangladesh. Poverty can also come from uneducated parents and consequentially create malnutrition, child marriage, child labor and many more that are directly linked with dropout. Poverty remains a big factor (Sabates et al., 2013), in both primary and secondary level of schooling that most of the dropout occurs at poor household at grade five or in the transition to lower secondary to upper secondary level for the reason of poverty (G. Brown, 2013, p. 7). Poverty is always existing as

one of the main ingredients for dropout that the author in her study found that, 27% of students drop out because of their parent's inability to pay the educational expenses (Khanam, 2008, p. 83). However, the following terms come hand in hand while discussing poverty:

### **Climate Change**

Climate change creates a financial loss, especially to the poor and disaster-affected families to stop the education of their children. Though in consideration of secondary school dropout, climate change and natural disasters are not discussed much in literature, few studies have acknowledged this as a severe problem. “Bangladesh is one of the most disaster-prone countries in the world due to the dense population, the unsafe structure of housing, reliance on agriculture and poverty throughout the country” (Yancey, 2015, p. 81). Between 1970 to 2005 there were 171 natural disaster happened in Bangladesh of which 516,239 people have incurred death (Yancey, 2015, p. 81); annually 30% to 50 % people affected by flood (G. Brown, 2013, p. 28), which result in long term and short term problem in schooling and turns the effects of natural disaster a pressing issue for Bangladesh education system. Yancey (2015) has also described that 23,236 school buildings were destroyed due to the flood in 2004 and 2,110 schools were damaged in the cyclone of 2007 (p. 82). In the time of the disaster, the cost of a tutor, guidebook and other additional cost rises so high that parents cannot often afford it, thus creating dropout for girls (Yancey, 2015, p. 36).

Another study also brings out the problem particularly in the “chars area (the river island)” and “haor area (the swamps)” where the population is the poorest and neglected population in Bangladesh (G. Brown, 2013, p. 28). The poor people cannot afford the school transport cost in the monsoon for example “boat” which eventually create dropouts by frequent missing class, exams, absence of teachers, lack of security (G. Brown, 2013, p. 28). Moreover, this lack of security in the disaster period changes the mind of the parents that turn to dropout and early marriages of their daughters (G. Brown, 2013; Yancey, 2015).

Though the government is aware of the problem, the natural disasters management committee is not much efficient and active in Bangladesh that the school buildings, the routes, overall infrastructure of schools are not repaired immediately enough after the disaster (Yancey, 2015, p. 81), ultimately the girls cannot start their school again and consequently create dropout.

## **Malnutrition**

“Malnutrition can cause students to not reach their full potential in their physical and cognitive development” (Yancey, 2015, p. 34). “Poor health” or malnutrition is an outcome of poverty that hinders the student’s education capability (Sabates et al., 2013, p. 226). Poverty creates malnutrition and malnutrition creates dropout; this is also an ugly truth for the children in Bangladesh studied by (G. Brown, 2013; Grira, 2001; Yancey, 2015). In the study, it is revealed that seven percent girl dropout occurs due to health issue that happens through the malnutrition and afterwards not enough money to get treatment as well as not getting enough nutritional food (Yancey, 2015, p. 34). The same fact also pronounced by (G. Brown, 2013). The study shows that malnutrition is a common and serious problem in Bangladesh where the children suffers most both in physical and mental development which has a strong relation with dropout in the later stage of education (G. Brown, 2013, p. 18); consequently the cognitive development and enrolment also affected because of malnutrition (Alderman et al., 2001; Behrman, 2006). These studies also reveal that school enrolment has a strong positive relation with nutritional status, which comes from the “haemoglobin level” in the blood (Alderman et al., 2001; Behrman, 2006).

## **Child labor**

One of the prevalent curses of poverty is child labor which is associated with school enrolment, attainment, continuity of poor children in Bangladesh (Shahina Amin, Quayes, & Rives, 2004; Salmon, 2005; Shafiq, 2007). “There is compelling evidence that child labor is associated with a curtailment of educational opportunity” (G. Brown, 2013, p. 22). Not only that, the physical and mental sufferings of the children are unbearable from “slavery” to “loss of freedom” where poverty works a “primary force driver” to enter into the labor market (G. Brown, 2013, p. 22). Child labor is a common issue in low-income countries whereas the children become unable to maintain both school and household work simultaneously (Admassie, 2003; G. Brown, 2013); as well as child labor perform as a key barrier to achieve EFA goals (G. Brown, 2013, p. 22). The higher the time spent by the children in works the higher the chance of dropout in them (Sabates et al., 2013, p. 230). A study based on market work and household work in Bangladesh revealed that child labor affects the schooling depending on the type of work, demographic differences, gender differences (Shahina Amin, Quayes, & Rives, 2006).



The type of engaging in child labor is different for both boys and girls (Yancey, 2015, p. 38). The girls are often having to participate labor which sometimes doesn't give direct income benefit to her, for example, rearing up of the younger siblings on the other hand, girls for example also engage in income-generating task like "maid", "tailoring" (S. R. Nath et al., 2017, p. 24). In the type of work, girls face more inbound and outbound risks than boys. The issue deeply discussed by (Yancey, 2015). The author discusses that male child worker does the agricultural job with their parents and thus can stay with family. But on the other hand, female child workers are entering the labor market through garments or household work in a wealthy family. The girl child comes with a hope that the wealthy families will give them a chance for education besides the household work, but that is not ultimately happening and thus creating dropout among girls much more. Rather there is a risk that most of the time, they are sexually assaulted by the male members in the family (p. 38). A study using data from the Bangladesh Labor Force Survey, 2000 revealed that there is one-fifth of child labor among all Bangladeshi children (Salmon, 2005). The author also added, the boys contribute more income to the family, whereas girls are mostly work in unpaid family work; but in the garments industry, urban girls have occupied a large portion of employment than the boys.

**Table 4. The trend of the percentage of child labor at ages 7-14**

Data Source: World development indicator

<b>Year</b>	<b>Child Labour</b>	<b>Child labor male</b>	<b>Child labor female</b>
2009	17.01%	15.6%	23%
2016	47.7%	50.35%	43.81%

Noted that, over the year, the percentage of children employment has an increasing trend. This is also true that the total number of populations has also increasing trend throughout the period. There are many reasons that can be associated with this increasing percentage of child labor, but this is obvious that when children are engaged with the labor market, then they need to move out of school. Note that, female child labor percentage has increased almost double by seven-year that might be a potential cause for a considerable percentage of girl are still dropping out from secondary school.

## **5.3 Household factors**

Household characteristics have a significant influence on children's education. In a developing country like Bangladesh, parents are used to thinking about the immediate benefit of their children. So, the norm in Bangladesh is to employ children in a household activity that directly and indirectly can earn money rather than sending them to school. Household size is also an important factor for dropout because it is observable that in large household, older children have to drop out to support their family financially and physically (Colclough et al., 2000). Moreover, the patriarchal culture, parental education, decision-making authority, house headed income often decide the decision about children's schooling in Bangladesh. According to Farah & Upadhyay (2017), "Parents may not send their children to school if they do not see education as a medium of increasing productivity or opportunity cost of schooling in terms of foregone earnings is too high" (p. 2). The rest of the discussion is below:

### **5.3.1 Household Work**

Parent's willingness and children's responsibility practices at home towards each other in the low-income family often determined the decision of dropout (Khanam, 2008). It is a tendency in developing countries that girls are the most responsible person for household work (Edmonds & Pavcnik, 2005). "Yet, most children in the developing countries provide unpaid agricultural and domestic labor, often at the expense of their education" (Admassie, 2003, p. 167). The household dependent on agricultural income is mostly needed the older girl children contribution for completing the home-based "chores" to help her parents and thus creating the dropout at early age (S. R. Nath et al., 2017; Yancey, 2015); though the agriculture is a periodical issue and not much effect on timing of school (Hadley, 2010). In the study of Yancey (2015), it is found that when a girl is getting married and shifted into a new family, she is becoming responsible for all kinds of household work including childbearing and rearing; while, sometimes the girls are not even entering into the first menstrual period but perform all the duties of her in-laws family and thus buried all her hopes to get educated and increase the dropout in-country. An interesting finding discusses the relationship among the paid labor work, mother, girls, boys work in Bangladesh by (Salmon, 2005). Where the author revealed that "Boys, unlike girls, are less likely to enter the labor market when their mother is engaged in paid labor activities. A possible explanation is that girls and mothers substitute for each other in performing household chores, while boys and mothers are a substitute for each other in paid

(wage) employment” (p. 47). In the other study, the authors suggested policy to build daycare in Bangladesh to increase the girls' schooling, considering the girls' involvement in the household for taking care of the younger siblings (Shahina Amin et al., 2006).

The girl child is often employed in fostering the younger children in the household which is more time and labor-consuming and often takes away them from the education, found in the discussion paper on review of empirical studies conducted in developing countries (Dar, Blunch, Kim, & Sasaki, 2002). Not only that, a study in Africa reveals that the girl's dropout is often related to the responsibility of caring for sick relatives and family members (Kane, 2004). Children in India have to participate in family income through household or outside work to help their impoverished families (Chugh, 2004). It is a normal practice that girls do more household work than boys in India (Bandyopadhyay & Subrahmanian, 2008) and the practices mostly prevail in rural girls than the urban girls (Ersado, 2005). The girls in Ethiopia, including fostering young siblings have also need to engage in cleaning, washing, cooking, fetching water, etc. (Admassie, 2003, p. 175). Moreover, the study based on household work and child labor in Bangladesh revealed that “the significant and positive gender coefficient of this paper suggests that girls are more likely than boys to combine schooling with work in Bangladesh” (Khanam, 2008, p. 96).

In the household context of labor, the girls are mostly involved in this unpaid work than the boys in Bangladesh and globally. It is evident from the review of literature that, this household work does not let the girls to complete their education as well as increasing the rate of girls' dropout in Bangladesh and globally.

### **5.3.2 Education of household members**

Parent's attitudes towards education and their educational background often determine their children's education level. In Bangladesh, parental education is one of the important factors to determine the decision about the continuation of school (Grira, 2001) and the dropout from school of their children (Chowdhury, Nath, Choudhury, & Ahmed, 2002; S. Nath et al., 2008; Sabates et al., 2013). This is also a significant determinant in considering of children education (Ersado, 2005), because the low level of parental education means the low level of access in the education of the children (Sabates et al., 2013, p. 227). They also mentioned that “Children of parents with secondary education were 38% less likely to drop out compared with children

of parents with less than secondary education” (Sabates et al., 2013, p. 230). However, other studies show that parents at least try to educate their children at their level of education (M. J. Grant & Hallman, 2008).

The early childhood education keeps a significant effect on the children to enter into academic life and less likely to dropout (G. Brown, 2013). Additionally, children with access to early education from their educated parents have strong “cognitive development” than the children who do not possess this access (Martinez, Naudeau, & Pereira, 2012). Parental education also has the relation with sending their children to work as the author said, “Children of parents who have more than primary school education are less likely to spend time working” (Sajeda Amin & Chandrasekhar, 2012, p. 34). Similarly, parent's low level of education increases the chance of their children to enter into the earning process early enough rather than the children of educated parents (Ersado, 2005). The dropout gradually decreases with the increasing of both parent's education. The education level of the female has a negative relation with child marriage founded in the study of (Suran et al., 2004) and thus education decreases child marriage and dropout.

It was found from the study of Education Watch Students' Profile (2007), that secondary student's parents are more educated and uneducated parents' children are more likely to drop out before entering secondary school (S. Nath et al., 2008). The study also finds a positive relationship between parent's and children's education like 52% of pass rate when the father has a bachelor's degree and it is higher like 72.4% when the mother has a bachelor's degree (p. 74). These similar findings are also presented in the paper that the parental level of education positively and negatively affects the dropout of their children (Battin-Pearson et al., 2000; Khanam, 2008). The summary of the result discussed below largely taken from (Farah & Upadhyay, 2017). Mothers with secondary education reduce the dropout rate of 2.6% (p. 13). The study also finds out some interesting things like if the mother is educated, then the father's education does not have enough effect on children's education, but the father's profession has a high impact on children's education. It also reveals in the study that; small businesses lower the dropout rate by 4.7%. High skill job requires higher education of parents that ultimately reduce the dropout rate 30%, whereas another low skill job factor provides a very insignificant result only 1.9% reduced dropout rate.

A study in Africa also reveals that low parental level of education generates low income and thus creates dropout, especially for girls (Pryor et al., 2003). These findings are similar to the findings in the study of (S. R. Nath et al., 2017). Whereas the authors show that, parental education has a contribution to gender-specific education in Bangladesh. The dropout rate of girls is significantly low like 19.8%, 12.6%, 6.3% respectively when the mother has education according to the increasing level of grade whereas, the dropout rate of girls is 20.2%, 17.5%, 7.5% when the father has the education (see appendix three and four) (p. 74).

Parental education has significant value on children's schooling. Especially the mothers' education is directed linked with the dropout (S. R. Nath et al., 2017), and in terms of reducing girls' dropout a mothers' education has a profound impact.

### **5.3.3 Decision-making power around the dropout**

Bangladesh is a male-dominated country. All the major decision-making power holds by the male member of the family. As a result, the decision preference for schooling especially goes for the boys. According to Shahidul (2013), "in the male-dominated society, decisions regarding the well-being of children, including their education, become gender-biased, thus resulting in a situation where girls may receive less preference relative to boys by the father" (p. 132). The summary is largely taken from (Shahidul, 2013), where the author found out a strong relationship between household decision making power and secondary school dropout of girls. He describes when a family is male-headed, then the dropout increases for girls and vice versa. In some patriarchal families, women often exercise the decision-making power, which decreases the dropout rate for girls. The paper summarizes the bargaining theory, which shows that fathers in Bangladesh have more education level, income, and decision-making power rather than the mothers. That is why the mother's more decision-making power reduces the dropout of their daughters; on the other hand, the father's more decision-making power positively higher the dropout rate of their daughters. The "male-dominated society" is one of the main reasons for the dropout of girls at secondary school in Bangladesh he concludes.

The decision making ability of women in Bangladesh is so vulnerable that in a study, it is found that when a girl is getting married in an early age she does not have much decision making power about pregnancy; the in-laws family and husband decide it whether they should have a

baby as well as the permission to go outside, having intercourse (Sayem & Nury, 2013). The tendency of hypergamy also create dropout, for example, husband is educated and aged than the wife, for that reason the husband take the decision of wife's schooling whereas the wife has nothing to say in this decision because of her minor age and low education in Bangladesh found in the study of (Arends-Kuenning & Amin, 2001).

Considering the financial necessity of family, the female-headed household faces more dropout. The studies reveal that "Children living in female-headed households were 67% more likely to drop out" (Sabates et al., 2013, p. 230). Married women-headed households have less dropout than "widow" headed households because of the requirement of earning (Shahidul & Karim, 2015). This indicates that the financial problem in female-headed family and decision making the power of women in Bangladesh has a significant relation with the dropout of girls at the secondary level.

## **5.4 School factors**

The school and its related factors have a significant impact on schooling. Schooling environment, teacher's qualification, distance, facilities all are associated with each other to retain or restrain a student from school. For a girl, the reasons are more significant because the parents need to evaluate these factors for their daughter's schooling much more than their son's schooling. The rest of the discussions are the following:

### **5.4.1 School Distance**

School distance deters the continuation of schooling among the children (Admassie, 2003; Colclough et al., 2000; Hunt, 2008; Latif et al., 2015; Momo et al., 2019; Sabates et al., 2013). But it is mostly the problem of girls' students existing in developing countries due to the fear of lack security, girls lack physical strengths, transportation cost, disaster period and many more (Chitrakar, 2009; S. R. Nath et al., 2017; Nekatibeb, 2002; Rihani, 2006; Yancey, 2015). For Bangladesh, it is a significant problem that the authors expressed, "The distance between home and school is a key issue for girls' secondary school access and continuation" (S. R. Nath et al., 2017, p. 61). In a study, it is revealed that school distance is so high that girls find it very

risky to walk in the very warm, humid weather and being starving that eventually ends up in dropout (Yancey, 2015). The author also added that distance of school increases the rate of child marriage in fear of getting harassed on the way which is eventually creating dropout. The problem is most prevalent in the rural area of Bangladesh as the author said, “Travelling long distances for schooling, which is typical in rural districts, is perceived as a risk factor for girls” (Chitrakar, 2009, p. 37). Another study, also point out the problem of transportation cost for the continuation of secondary girls’ schooling (S. R. Nath et al., 2017, p. 61), because parents don’t feel it safe to walk for the girls, whereas for the boys it is a normal practice to go school by walk (Rihani, 2006, p. 21).

A study in Afghanistan acclaimed that “In general, distance from home to school may socially acceptable for boys to walk or travel, but for girls, it can be a big problem, especially in rural areas” (Shafique, 2013, p. 8). There is also a fear of sexual harassment on the way to school in Africa (Colclough et al., 2000; Nekatibeb, 2002; Rihani, 2006). A study conducted in Ethiopia revealed that 15% of the surveyed children avoid school for the distance problem (Admassie, 2003, p. 178). School distance is one of the great determinants for girls’ dropout, especially in a country like Bangladesh where a girl has to face numerous obstacles to reach school.

#### **5.4.2 School environment, safety issues, and female teachers**

The school system and the factors related to it have a significant influence on dropout especially at the community level (Alexander, 2008). According to Yancey (2015), “Schoolgirl dropouts persist partly due to the lack of quality within the secondary school system and departmental sectors” (p. 80). Quality of education and learning environment are significantly important that over half of the girl's dropout at a higher secondary level due to the poor result in board exam as the cornerstone of education is so weak to them (G. Brown, 2013, p. 8). The similarity also found from the other author said, “Even when the girls continue their secondary education, their incompetence prevents them from continuing further studies resulting in drop-out” (Karmakar, 2006, p. 4). Karmakar (2006), put some “gender irrespective” issues in-school factor that create dropout in secondary level: “inadequate infrastructure in school manifests in the form of insufficient teachers, lack of informative books, unskilled teachers, adverse teacher-student ratio, poor communication system, and lower salary structure of teachers, inferior quality of mid-day meal, unsafe drinking water, unhygienic sanitation facilities, unpleasant

learning environment, and absence of co-curricular activities, political influence and inefficient governing body” (p. 4). For decreasing the girl’s dropout Yancey (2015), urges to make the balance between “decreased class size” with “more teacher” and create an environment for “access to free tutoring” (p. 95).

In several studies, it is found that girls’ poor attendance in the class often happens due to the unhygienic toilet in the school, especially in the menstruation period (Chitrakar, 2009; M. Grant, Lloyd, & Mensch, 2013; S. R. Nath et al., 2017). There is still a lack of very basic facilities as well as the average ratio of toilet and student is very low that it is only 150:1 (Prodhan, 2016, p. 126). Yancey (2015), has also noted the problem of school infrastructure, especially in the disaster period time which has a significant effect on girls to continue school.

The lack of female teachers is one of the important determinants of dropout amongst girls (Amadi et al., 2013). The study carried out in Pakistan and Afghanistan reveals that female teacher has a strong negative correlation with girls’ dropout (Holmes, 2003; Shafique, 2013; Solotaroff, 2007). In Bangladesh, girls also feel uncomfortable without female teachers (Chitrakar, 2009, p. 37). At least “two female teacher policy” by Bangladesh government is commendable in enhancing girls participation in secondary school but most of the time the rule is not maintained by the school committee (Yancey, 2015, p. 92). It is also noticeable that girls’ dropout is sometimes often as a result of male and female teachers’ gendered attitude toward the girl students that they the girls are not competent enough to complete and should leave from education earlier (Colclough et al., 2000; Nekatibeb, 2002).

## **5.5 Government infrastructure factors**

In terms of improving girl’s education in Bangladesh, the initiatives taken by the government frequently with the help of national and international organization is appreciable. Though some problems still exist in the government infrastructure and political decision-making process that the dropout of girls at the secondary level is still in alarming position. The rest of the discussion is following here:

### **5.5.1 Government infrastructure and Political condition**

“The lack of government infrastructure perpetuates the problems for girls within Bangladesh” (Yancey, 2015, p. 95). Less number of secondary schools in comparison to primary school and



guidebooks, exam fees all are creating dropouts at the secondary level (Sajeda Amin & Chandrasekhar, 2012). “The NGOs, though playing an active role in primary education, are not so organized in the secondary education level” (Karmakar, 2006, p. 4). The primary school is free for all; that is why the enrolment and completion rate has changed rapidly. On the other hand, secondary school students still need to depend on personal out of pocket money (S. R. Nath et al., 2017), which is sometimes a big burden for a low-income family to spend especially for a girl because, in a developing country like Bangladesh the son’s get the preference for education considering the future benefit of parents. Though the FSP has increased girl’s enrolment at the secondary level, the other indirect costs of girl’s schooling should come into consideration of government budget planning to increase the stipend amount (Raynor et al., 2006). The other serious issue, a disability which is gender irrespective, though did not cover by much literature but has a significant effect on dropout. The school infrastructure in Bangladesh is not adequate for disabled children; thus ensuring low enrolment and low transition (Filmer, 2008) and consequently becoming one of the reasons of dropout in Bangladesh (Sabates et al., 2013, p. 226). In a study, it is found out that, “Disabled children were 90% more likely to drop out relative to other children” (Sabates et al., 2013, p. 230). As usual, the girls, especially in a rural area, are the most affected part of this disability that they attain the school less than the boys (Hunt, 2008; Rousso, 2003). Another kind of problem is that the school teachers are engaging in private tutoring to earn extra income from parents as well as sometimes the school committee ask for donations from parents for school development which shows the inappropriate administration system of government (Rihani, 2006, p. 25). Corruption in education is prevalent in Bangladesh that affects the transfer of teachers and devaluating their qualifications (Prodhan, 2016).

“Political influence” and “inefficient governing body” are also important factors in school infrastructure, which is creating dropout (Karmakar, 2006). The “political rivalry” is sometimes so extreme that the schools may stop receiving government benefit if it is facilitated and influenced by the other political party in the earlier regime discussed by (Yancey, 2015); thus, the teachers don’t get their salary, as well as the schools and students, are not receiving their benefits which are eventually create dropout. The author concludes that girls’ secondary schooling is being hampered through the “high rate of corruption” and “party rivalry” in Bangladesh (p. 94).

But as a light at the end of the tunnel, the government has taken good initiatives with the help of NGOs to retain and enhance the quality of the secondary girls' students for example, minimum two female teacher in secondary school, campaign of "Best School for Girls" etc. as they are all needed for sustained development of girl's education.

## 6. Summary of the Findings from the mixed studies

The table represents the relationship between the causes and dropout. For example, if there is child marriage, it has a positive consequence on dropout in most of the time; hence, the summary taken from the perceived results of the review of literature:

**Table 5. Key determinants of school dropout**

Factor	Influence	Literature
Early Marriage	Positive	(G. Brown, 2013; Chitrakar, 2009; Dunne et al., 2005; M. J. Grant & Hallman, 2008; Hove, 2007; Mahmud & Amin, 2006; S. R. Nath et al., 2017; Tuwor & Sossou, 2008; Yancey, 2015)
Late school entry	Positive	(Farah & Upadhyay, 2017; S. R. Nath et al., 2017; Yancey, 2015)
Mother's education	Negative	(Arends-Kuenning & Amin, 2001; Behrman, 2006; Birdsall et al., 2005; G. Brown, 2013; Farah & Upadhyay, 2017; Khanam, 2008; S. R. Nath et al., 2017; Sabates et al., 2013; Suran et al., 2004; Yancey, 2015)
Father education	Negative	(Arends-Kuenning & Amin, 2001; Behrman, 2006; G. Brown, 2013; Farah & Upadhyay, 2017; Khanam, 2008; S. R. Nath et al., 2017; Sabates et al., 2013; Suran et al., 2004; Yancey, 2015)
Malnutrition	Positive	(Alderman et al., 2001; Arends-Kuenning & Amin, 2001; G. Brown, 2013; Grira, 2001; Yancey, 2015)
Poverty	Positive	(G. Brown, 2013; Lewin & Sabates, 2012; Mahmud & Amin, 2006; Sabates et al., 2013; Tuwor & Sossou, 2008; Yancey, 2015)
Child labor	Positive	(G. Brown, 2013; Khanam, 2008; Tuwor & Sossou, 2008)
School attendance with child labor	Negative	(G. Brown, 2013; Khanam, 2008)

Women's education with early marriage	Negative	(Arends-Kuenning & Amin, 2001; G. Brown, 2013)
Inadequate School related facilities	Positive	(Alexander, 2008; Proadhan, 2016; Yancey, 2015)
Nutritional status with enrolment	Positive	(Alderman et al., 2001; Arends-Kuenning & Amin, 2001; Behrman, 2006; G. Brown, 2013; Grira, 2001)
Income level of parents	Negative	(Farah & Upadhyay, 2017; Hadley, 2010; Kane, 2004; Khanam, 2008; Sabates et al., 2013)
Parental interest and involvement	Negative	(Admassie, 2003; Jeynes, 2007; Sabates et al., 2013; Yancey, 2015)
School size	Negative	(Fortin et al., 2013; Werblow & Duesbery, 2009)
School quality	Negative	(G. Brown, 2013; Hanushek et al., 2008)
Pupil-teacher relation	Negative	(Behrman, 2006; Proadhan, 2016; Rumberger, 2004)
Female teacher	Negative	(Asadullah & Chaudhury, 2010; Holmes, 2003; Shafique, 2013; Solotaroff, 2007)
Overage	Positive	(Farah & Upadhyay, 2017; Lewin & Sabates, 2012; Sabates et al., 2013)
Household work	Positive	(Admassie, 2003; Dar et al., 2002; Farah & Upadhyay, 2017; Khanam, 2008; Tuwor & Sossou, 2008)

## 6.1 Intervention program

“In developing countries and elsewhere, interventions have to be made on the basis of faith, i.e. education for girls is good; however, such a large-scale and well-funded intervention should have invested financial and technical resources for a monitoring and evaluation plan” (Schurmann, 2009, p. 514).

There are a lot of discussions around intervention programs taken by the government and non-government organizations to eradicate dropout from Bangladesh, found in the literature. Among the intervention programs, Financial Stipend Program (FSP) is one of the most

important intervention programs taken by the Bangladesh Government in 1982 in order to increase the participation and retention rate of girls at the secondary level in the rural area (Raynor et al., 2006). The FSP in Bangladesh is considered a success and role model for the world (Raynor et al., 2006; Song et al., 2006). The stipend program has proved that it can “resolve a host of education, gender and development problems” (Raynor et al., 2006, p. 2). This FSP program has also implemented at Punjab in Pakistan, where the gender disparity is extreme and also in Rwanda, Congo, Ghana to reduce HIV (Schurmann, 2009, p. 514).

The objectives of this program are: “Enrolment and Retention Parity”, “Delayed Marriage and Fertility Control”, “Employment-Income Generation”, “Equality or Empowerment”, “Quality”, “Poverty Alleviation” (Raynor et al., 2006). This program has four projects through ministry of education in Bangladesh with the assistant of International organization World Bank, ADB, NORAD; providing restriction of being unmarried, 75% attendance and 45% marks in examination to get the stipend facilities (Ahmed, Saleh, Nurul, & Romij, 2007, p. 49). The authors also reviewed the stipend system both positively and negatively. The positive sides are it is encouraging women empowerment and decreasing the administrative evils; the negative sides are it only covers the direct cost and does not consider the disadvantaged girls (p. 49). Similarly, the negative sides are also pronounced by (Mahmud, 2003; Raynor et al., 2006). Mahmud (2003), claimed that the FSP only covers the direct cost hence; provide the same poor amount in every grade which ultimately cannot cover all the expenses to send a girl to school. There is also the possibility that girls will leave from studies if there is no stipend (Mahmud, 2003, p. 13). The author showed that in 2005 due to the strong monitoring on disbursements and lessening the stipend resulted in increasing the dropout rate among girls and the author is in fear that it may cause to lower the primary enrolments as well (Raynor et al., 2006). On the contrary, Schurmann (2009), don’t find this program beneficial for women to improve their quality of life as well as not make them enough competent to survive in the “social”, “political”, “economic life” (Schurmann, 2009, p. 514). Similar findings were discussed that the program has a little contribution to achieving the other objectives (Raynor et al., 2006, p. 9). Mahmud (2003), put criticism on “quality of education”, “equality” and “sustainability” in this program and describe it as a political weapon (p. 12). In the other study, it is found that the reason for increasing girls’ enrolment in a rural area at the secondary level is this FSP program (Huq & Rahman, 2008, p. 116). But when it comes to the result of board exam the boys are doing better than girls; the reason behind it is that the girls are enjoying the stipend with the help of dishonest clerk without completing the stipend getting criteria (Huq &

Rahman, 2008, p. 122). The authors are also worried about the sustainability of the program because the financial expense behind it could use in other purposes for a poor country like Bangladesh and suggest a cost effective long term planning to continue the program (Raynor et al., 2006, p. 9).

## 6.2 Recommendations

These recommendations are largely taken from the review of literature where the authors put their recommendations based on their studies:

**Table 6. Recommendations based on literature review**

Recommendations	Literature
Special female stipend	(Nekatibeb, 2002; Shahidul & Karim, 2015)
Making education full free including the textbook, exam fee and affordable for all level of society	(Latif et al., 2015; S. R. Nath et al., 2017; Prodhan, 2016; Sabates et al., 2013; Shahidul & Karim, 2015; Yancey, 2015)
Demand wise government investment in schools	(Shahidul & Karim, 2015)
Increasing the number of skilled teachers, female teachers and decreases the class size	(Amadi et al., 2013; Asadullah & Chaudhury, 2010; Chitrakar, 2009; S. R. Nath et al., 2017; Nekatibeb, 2002; Prodhan, 2016; Rihani, 2006; Shahidul & Karim, 2015; Yancey, 2015)
Special spending for disadvantaged students	(Ahmed et al., 2007; Sajeda Amin & Chandrasekhar, 2012; S. R. Nath et al., 2017; Prodhan, 2016)
Stop Administrative corruption	(Chitrakar, 2009; Huq & Rahman, 2008; Prodhan, 2016)
More high schools and attractive provisions	(Huq & Rahman, 2008; S. R. Nath et al., 2017; Nekatibeb, 2002; Noori, 2017)

Lessening the school distance for girls	(Latif et al., 2015; S. R. Nath et al., 2017; Nekatibeb, 2002; Noori, 2017; Rihani, 2006; Yancey, 2015)
Involve authorities to stop girls' harassment	(Chitrakar, 2009; S. R. Nath et al., 2017; Rihani, 2006; Yancey, 2015)
Age-appropriate admission	(S. R. Nath et al., 2017; Sabates et al., 2013)
Collaborative effort to reduce child marriage and dropout	(G. Brown, 2013; Chitrakar, 2009; M. J. Grant & Hallman, 2008; Latif et al., 2015; S. R. Nath et al., 2017; Yancey, 2015)
Opening the technical and vocational sector in schools	(Chitrakar, 2009; S. R. Nath et al., 2017; Prodhan, 2016)
Community-based advocacy and raise awareness	(Admassie, 2003; S. R. Nath et al., 2017; Nekatibeb, 2002; Noori, 2017; Yancey, 2015)
Technology in the classroom	(S. R. Nath et al., 2017; Prodhan, 2016)
Quality in education and teachers	(Noori, 2017; Rihani, 2006; Schurmann, 2009)
Parental involvement in education	(Admassie, 2003; Amadi et al., 2013)
Infrastructural development of the school	(Nekatibeb, 2002; Rihani, 2006)
An integrated approach to minimize Child labor	(Admassie, 2003; G. Brown, 2013; Khanam, 2008; Salmon, 2005; Shafiq, 2007)

## **Section II- Empirical analysis**



## 7. Empirical analysis

This paper used secondary data to define main causes for girl's pupil dropout at secondary school in Bangladesh. Below is a detailed explanation of the data description, the empirical method used for this analysis also significant results based on data analysis.

### 7.1 Data description

The data set used in this paper covers the period of 2000 to 2018 in Bangladesh. Based on literature review revealed that poverty is one of the most important cause for girl's dropout. Noted that this paper used income which represent by GDP per capita. Because poverty data is not available for year-by-year basis. Furthermore, a certain percentage of population is affected by poverty. However, both GDP per capita and girl's dropout have an impact on entire population in Bangladesh. Thus, this paper used GDP per capita instead of poverty for empirical analysis.

GDP per capita and the child marriage data change very slowly on a year-by-year basis; for this reason, this paper chooses long-time period observation instead of a short period observation. Furthermore, girl's secondary school dropout and GDP per capita are sluggish variables, which meaning that in the absence of any external or internal shocks to the economy those types of data do not change that much. Therefore, looking just over a short time frame will not give very precise results or help us to understand the overall trends for a long time period. Besides, a longer time frame has the advantage of allowing us to examine how over the year changing on GDP per capita can affect in reducing on girl's pupil secondary school dropout. The below table gives an overview of variables, detail definitions of each variable and data sources used for this paper.

**Table 7. Variable, definition and Data source**

The below table gives a detail description of the variable name then the definition of each variable and data sources.

Variable	Definition	Data Source(s)
cm_18	Child marriage by age 18	World Bank
cm_15	Child marriage by age 15	World Bank

<b>t_dropout</b>	Total dropout	BANBEIS
<b>boys_ssdr</b>	Boys secondary school dropout	BANBEIS
<b>girls_ssdr</b>	Girls secondary school dropout	BANBEIS
<b>gdp_percapita</b>	GDP per capita (current US\$)	World Bank
<b>exp_secondary</b>	Expenditure on secondary education (% of government expenditure on education)	World Bank
<b>ses_male</b>	School enrolment, secondary, male (% net)	World Bank
<b>ses_female</b>	School enrolment, secondary, female (% net)	World Bank
<b>ses_net</b>	School enrolment, secondary (% net)	World Bank
<b>childlabor</b>	Children in employment, wage workers (% of children in employment, ages 7-14)	World Bank
<b>childlabor_m</b>	Children in employment, wage workers, male (% of male children in employment, ages 7-14)	World Bank
<b>childlabor_f</b>	Children in employment, wage workers, female (% of female children in employment, ages 7-14)	World Bank

This research uses secondary data; and those data sources described at the above table. The BANBEIS dataset widely used for school attainment analysis because of their experiment covers an extended time period. However, BANBEIS dataset mainly priorities on detail information about attainment but excluded other factors that are directly and indirectly affected school attainment. Therefore, this paper examined aggregate data from World Development Indicator to examine causal correlation on girl's secondary school dropout. ("World Development Indicators (WDI),") database is a regular quarterly update with over 800 indicators. It is a good choice to collect data from this source because of this includes both new indicators as well as updates to existing indicators. Besides, the WDI dataset also included several other sources data, such as child marriage data is primarily collected by Bangladesh Demography and Health Survey (BDH). However, WDI also included this data on their dataset. To provide a better idea of the data used in this research, Table 8 indicating the summary statistics of the variable. Based on the description statistics, the reader can see the different variables used in this paper. Also mean values, standard deviation, minimum and maximum values for each variable.

**Table 8. Summary statistic of different variables**

Data Source: World development indicator and BANBEIS

<b>. summarize</b>					
Variable	Obs	Mean	Std. Dev.	Min	Max
year	11	2013	3.316625	2008	2018
cm_18	8	60.875	5.276295	52	66
cm_15	8	26.5	4.566962	20	32
t_dropout	11	46.20818	8.522184	37.43	61.38
boys_ssdr	11	40.31091	9.21726	33.43	57.29
girls_ssdr	11	50.85091	8.793327	40.19	65.69
gdp_percap~a	11	1079.091	357.1673	634	1698
exp_second~y	7	38.78571	2.4514	35.25	41.14
ses_male	8	49.25	6.840008	42	60
ses_female	8	55.75	8.20714	47	67
ses_net	8	52.5	7.387248	45	63
childlabor	2	32.355	21.70111	17.01	47.7
childlabor_m	2	32.98	24.57903	15.6	50.36
childlabor_f	2	33.405	14.71489	23	43.81

The above table shows a detail description of each observation. The above table gives an overview of the data used for this paper and detail can be examined by look into each observation. In detail, mean value, standard deviation, minimum and maximum value for each kind of variable. It is noticeable that when looking at GDP per capita for Bangladesh, the maximum value is \$1698 in 2018 and the lowest was \$634 in 2008. In 2008, the girl's secondary school dropout rate was 65.69% which was the highest compared to the rest of the year observation. However, in 2018, the girls' secondary school dropout rate has declined to 40.19%. The mean value of the girl's pupil secondary drops out is more than 10% higher compared with the mean value of the boy's secondary school dropout rate. However, the mean percentage of total dropout for both genders is around 47%.

## 7.2 Methodology for empirical analysis

There are two ways to estimate the true causal impact of the intervention on the subject. One is Randomized control trial (RCTs) which is the most reliable method for assessing the effectiveness of the intervention. RCTs induce a change in the process at random and measure the corresponding change in the outcome variable (Holland, 1986). However, in general, it would be impossible to conduct experiments and control the whole system to be truly as random. While, not all interventions can be assessed with RCTs because some experiments can be expensive, unethical or even impossible. As an example, RCTs will be unethical to measure

the causes of girl's secondary school dropout with the correlation of independent variables such as poverty, child marriage, and gender disparity.

When data is not RCTs but real-world observational data then we use causal inference in econometrics and this method involves the application of statistical procedures to the data that is available already to arrive at the causal estimate while controlling for confounders. Some approaches under this method are what this paper was examined to find a causal relation for this analysis. The following are the approaches such as Multiple regression, Interrupted Time-series (ITS), Difference in Differences (DID) and Synthetic Control.

This paper uses real-world observational data instead of Randomization control trials (RCTs) data. Because it is not possible to experiment on RCTs in this case. The main challenge for observation data has selection bias and the threat of external validity. To solve selection bias, we are using the method of propensity scores, difference-in-difference method. Omitted variable bias (OVB) is one of the threats to internal validity. If the omitted variable is known, then this can be included in the multiple simple linear regression model. Whilst, if it is not known then we have to use an instrumental variable (IV) approach. However, this paper cannot use the instrumental variable method because this paper is assessing macro-level data analysis. In addition, credible instruments are extremely hard to find, and instrumental variable methods are often unable to account for the possible heterogeneity in the relationships. This research also cannot apply the approaches of Difference in Differences or Synthetic Control method. This paper used simple multiple regression to identify correlation on girl's secondary school dropout rate with few significant independent variables.

To define causal correlation with girl secondary school dropout rate with few potential variables like child marriage, GDP per capita, poverty, schooling cost, decision making, government infrastructure, and gender disparity. Based on observational data this paper will use simple multiple regression to find the causal correlation of girl's secondary school dropout with few independent variables. Considering the above condition this analysis will be assessing simple regression to estimate the causal effect of GDP per capita, child marriage on girl's dropout at secondary school. Girl secondary school dropout data are normally distributed (see Appendix five). For this reason, we can use standard t-test or linear regression. If the dataset is not normally distributed, then it is required to use bootstrapping or log transformation.

## 7.3 Empirical result

Before running regression, it is very important to check the assumption. In detail, the variable should be continuous and normally distributed or non-normally distributed. Usually, check that the dependent variable (girl's secondary school dropout rate) needs to be normally distributed. Specifically, the residuals, the distance from each observation to the line should be normally distributed. Multiple regression assumes that the residuals are normally distributed. In addition, we can use Shapiro-Wilk normality test to test for normality. If data is not satisfying normality assumption, then we need to use non-parametric, either log transformation or bootstrapping method. Girl's secondary school dropout rate data is normally distributed, for this reason, this paper using multiple regression (parametric test) instead of log transformation.

### 7.3.1 GDP per capita impact on girl's dropout at secondary school

The below table gives a causal correlation between a girl's secondary school dropout rate with GDP per capita. To define the causal correlation between the girl's pupil secondary school dropout rate with GDP per capita below regression is calculated. This paper investigates, for instance, the percentage of GDP per capita, child marriage causes to girl's secondary school dropout.

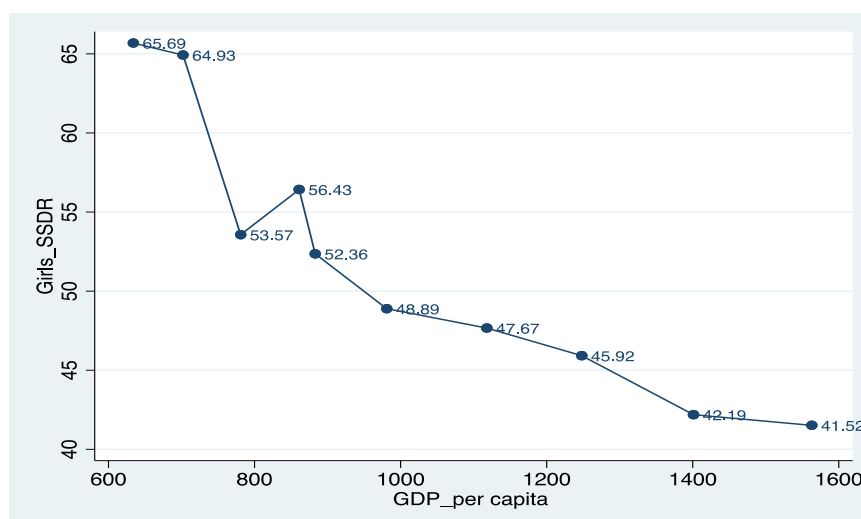
$$girls\_ssdr_t = \beta_0 + \beta_1 GDP\_percapita_t$$

**Table 9. GDP per capita impact on girl's dropout at secondary school**

Data Source: World development indicator and BANBEIS

. reg girls_ssdr gdp_percapita						
Source	SS	df	MS	Number of obs	=	11
Model	654.842452	1	654.842452	F(1, 9)	=	49.78
Residual	118.3836	9	13.1537334	Prob > F	=	0.0001
				R-squared	=	0.8469
				Adj R-squared	=	0.8299
Total	773.226052	10	77.3226052	Root MSE	=	3.6268
girls_ssdr	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
gdp_percapita	-.0226567	.0032111	-7.06	0.000	-.0299207	-.0153927
_cons	75.29955	3.633516	20.72	0.000	67.07997	83.51914

Above simple regression, the dependent variable (*girls\_ssdr*) is girl's secondary school dropout rate and the independent variable is *GDP\_per capita*.  $R^2$  is the coefficient of determination which explained model fit good or not and here  $R^2$  is 0.8469 or around 85% which indicates a very good fit model. The regression in the first column shows the effect of GDP per capita on girl's secondary school dropout without any other control variables such as child marriage. Every unit increase of *GDP\_per capita* has negatively correlated with girl's school dropout which is .022 or 2%. This means that increasing income influences reducing girl's pupil dropout at secondary in Bangladesh. This coefficient is statistically significant at any significant level because of the lower p-value. Also, the confidence interval does not contain zero.



*Figure 7. The trend of the GDP per capita and girl dropout rate at secondary school*  
*Data Source: World Development Indicator and BANBEIS*

The above figure shows that the vertical axis for girl's dropout at secondary school and the horizontal axis indicates GDP per capita over the time from 2008 to 2018. Figure 8 indicates that there is a negative correlation between a girl's dropout at secondary school with GDP per capita throughout the period. Noted that, regression table 9 also shows a similar correlation between these two variables. Furthermore, several literates also found a similar correlation when analyzing the relationship between a girl's secondary school dropout rate with GDP per capita. In 2008, *girls\_ssdr* percentage was above 65% and GDP per capita was around 634 USD whilst, in 2018, which rose to nearly 1563 USD and *girls\_ssdr* also fall to almost 40%. However, still, a significant number of girl's pupils are dropping out of secondary school.

### 7.3.2 Child marriage impact on girl's dropout at secondary school

From literature review indicates that child marriage has a significant positive correlation on girl's pupil dropout at secondary school in Bangladesh. To define the causal correlation between the girl's pupil secondary school dropout rate with child marriage below regression was evaluated.

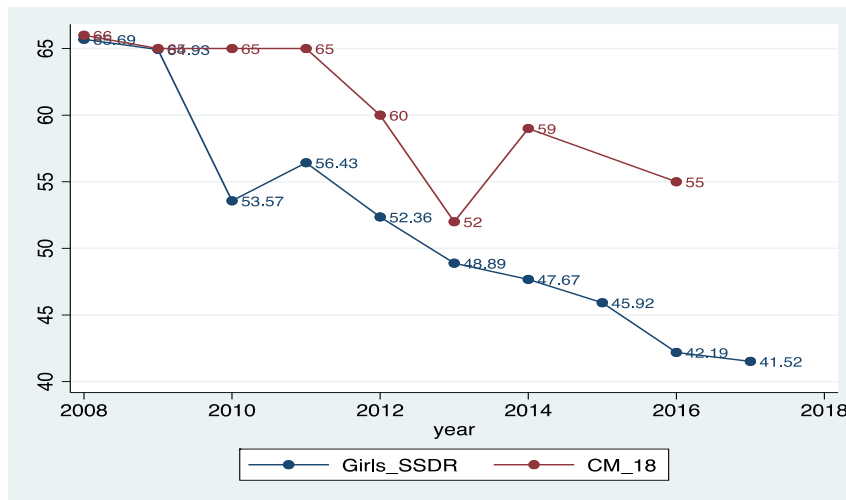
$$girls\_ssdr_t = \beta_0 + \beta_1 cm\_18_t$$

**Table 10. Child marriage impact on girl's dropout at secondary school**

Data Source: World development indicator and BANBEIS

<b>. reg girls_ssdr cm_18</b>						
Source	SS	df	MS	Number of obs	=	8
Model	298.750835	1	298.750835	F(1, 6)	=	10.43
Residual	171.797678	6	28.6329463	Prob > F	=	0.0179
				R-squared	=	0.6349
				Adj R-squared	=	0.5740
Total	470.548513	7	67.2212161	Root MSE	=	5.351
girls_ssdr	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
cm_18	1.238159	.3833142	3.23	0.018	.3002231	2.176095
_cons	-21.40669	23.41082	-0.91	0.396	-78.69091	35.87752

Simple regression table 10, indicate a correlation between a girl's secondary school dropout rate with child marriage at age 18. The coefficient of determination is  $R^2$  which explained model fit good or not and above regression shows  $R^2$  is 0.63 or 63%. This indicates quite a good fit of the regression model. Every unit increase of child marriage has positively correlated with girl's secondary school dropout rate which is 1.23 or around 1.2 times and this result is statistically significant at 5% but not at 1%. Since confidence interval does not contain zero and positive and significant levels proved that child marriage has a very important impact on girl's secondary school dropout. Increasing child marriage correlated with increasing girl's pupil secondary school dropout rate. Literature review finding also consistent with this regression coefficient.



*Figure 8. The trend of the child marriage rate and girl's dropout at secondary school*  
*Data Source: World Development Indicator and BANBEIS*

The above figure shows that there is a positive correlation between a girl's secondary school dropout with child marriage. The vertical axis indicates the secondary school dropout rate for girls' pupils and child marriage rate at age 18 and the horizontal axis indicates the time period from 2008 to 2018. Both girl's secondary school dropout rate and child marriage at age 18 have a decreasing tendency throughout time. A possible explanation is that reducing child marriage has affected in reducing the number of girl's secondary school dropout or another way around can also be a possible explanation. Noted that, the above figure shows still a significant number of child marriages as well as girl's pupil dropout at secondary school.

### **7.3.3 GDP per capita, child marriage impact on girl's pupil dropout**

Multiple regression to estimate the causal effect of the girl's pupil dropout at secondary school on a few significant independent variables. To do this require making sure that all relevant covariate is included. It is important to examine the role of covariates by adding those to the regression equation. Predictor not significant and has the expected sign then keep it and if the predictor not significant and does not have the expected sign then drop it.

The dependent variable is Girl's secondary school dropout rate (Y) and independent variables (X) are GDP per capita, child marriage, and secondary net % of school enrolment for females.



School enrolment, secondary, female (% net). This paper used multiple regression to define causal correlation on girl's secondary school dropout rate (y) with few significant independent (x) variables.

$$girls\_ssdr_t = \beta_0 + \beta_1 GDP\_percapita_t + \beta_2 cm\_18_t + U_t$$

Where  $t$  indexes time from 2008 to 2018,  $girls\_ssdr$  which is girls secondary school dropout rate (y) which is the dependent variable, where  $\varepsilon_i$  are independent, normally distributed, with equal variance,  $\beta_0$ = measure constant term, intercept determines the level of regression.  $R^2$  and standard error of the regression (SER) how close the value of  $girls\_ssdr$  is to the estimated regression line.  $GDP\_percapita$  is the indicator income from 2008 to 2018,  $\beta_1$  is the slope coefficient on  $GDP\_percapita$  that mean the expected change in  $girls\_ssdr_t$  associated with one unit change in  $GDP\_percapita$ .

**Table 11. GDP per capita, child marriage impact girl's dropout at secondary school**

Data Source: World development indicator and BANBEIS

. reg girls\_ssdr gdp\_per capita cm\_18

Source	SS	df	MS	Number of obs	=	8
Model	406.974288	2	203.487144	F(2, 5)	=	16.00
Residual	63.5742248	5	12.714845	Prob > F	=	0.0067
				R-squared	=	0.8649
				Adj R-squared	=	0.8109
Total	470.548513	7	67.2212161	Root MSE	=	3.5658

girls_ssdr	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
gdp_per capita	-.0242309	.0083055	-2.92	0.033	-.0455808	-.002881
cm_18	.3817161	.3891301	0.98	0.372	-.6185747	1.382007
_cons	53.02473	29.90415	1.77	0.136	-23.84634	129.8958

$\beta_1$  is the slope coefficient on  $GDP$  per capita is the mean expected to change in  $girls\_ssdr$  associated with a one-unit change in  $GDP$  per capita .  $R^2$  is the coefficient of determination which explained model fit good or not and here  $R^2$  is 0.8305 or 83% which indicates a very good fit model. Girl's dropout is a negative correlation with income (GDP per capita). The above multiple regression indicates a correlation between girl's secondary school dropout with GDP per capita, Child marriage from 2008 to 2018 in Bangladesh. The simple multiple

regression tries to quantify how much the explanatory variable impacts the girl's drop out at secondary school in Bangladesh.

Every unit increase of GDP per capita has correlated (-.024) or around 2% reduction of secondary school drops out for girls. GDP per capita has a negative correlation with girl's dropout at secondary school, but multiple regression shows only 5% statistically significant level. Based on this estimate, by increasing income, there is also a decrease correlation with the girl's dropout at secondary school. The literature section also consistence with this negative correlation between GDP per capita with girl's dropout.

## **8. Discussion and Conclusion**

This study tries to discuss the factors that are particularly relevant to girl's dropout at secondary school while there are also some other gender irrespective causes are mentioned in the paper. Hence; it is understandable from the review section that being a part of the male-dominated developing country the impact of these gender irrespective issues touching upon the female portion in Bangladesh more heavily. Moreover, girls belong to the special kind of features that make their educational outcome more vulnerable. Secondary data analysis in this paper indicates that early marriage has a statistically significant value and positive correlation with girl's dropout. Furthermore, GDP per capita has a negative correlation with girl's dropout which means that increasing income influences reducing girl's dropout at secondary school.

### **8.1 Main findings from the literature**

Being a part of the least developed and male-dominated country like Bangladesh; the women have already occupied a vulnerable position in society. Bangladesh is engrossed with all the problems that one developing country could have. The women will be at the top of the list to be affected by all these problems it is almost obvious. The education sector is not different from it. Despite all the necessary initiatives by government and non-government organizations, the problem of dropout could not stop yet. This indicates that the problem is deeply rooted in the social, cultural, financial, household and many more context of Bangladesh. The socio-cultural, economic, household, school, government infrastructure factors in this paper have tried to bring the important causes of girls' secondary dropout. While, this paper has admitted that there are so many unnamed and undefined causes are still existing in the society that is continuously creating dropout.

From the literature review part, it is understandable that dropout is a single phenomenon in a girl's life, but it has a past, present and future impact in her life. However, the girl's reasons for dropout in some specific context are completely different from boys. One of that is child marriage which is only enough for increasing the dropout for girls. The rate of child marriage is still alarming. Child marriage is the outcome of poverty or the socio-economic status of parents. The inability to pay the education costs, the larger number of household members, the preference for gender, the thought of low dowry, the patriarchal thought, the social pressure, religious or cultural belief, insecurity make a combined net to restrain a girl from education,

by engaging them in early marriage or by entering in labor-intense activity with or without remuneration. The perception of girls' education in Bangladesh is still limited in their good marriage and if not marriage then they can be a source of income or can continue education if the family can support. "One reason why women's education is valuable in the marriage market is that it is an input into children's schooling" (Arends-Kuenning & Amin, 2001, p. 139). Women's education is particularly important because there is a negative relationship between women's education and early marriage that the study found out that girls with secondary or higher education take five years more time to get married than the uneducated girls (G. Brown, 2013, p. 25).

Poverty is the key factor that instigates the dropout in developing countries as well as in Bangladesh. Financially insolvent parents being busy at work for earning livelihood often separated themselves from children's education. While the parents are not literate, they will not understand the importance of educating their children. The resources are scarce for a developing country like Bangladesh. The calculation of weighing the opportunity costs leads the girls often to dropout by the process of early marriage, labor work in the household and outside. Moreover, uneducated parents for the sake of poverty do not find any interest to educate their daughters while they think the investment can go for a dowry to get a good groom. The rest of the family resources goes to educate the male members of the family if the parents do not find any near income-generating opportunities for their boys. Thus, poverty also stimulates the parents to be gender-biased while they also compare the potential future benefit between son and daughter. Patriarchal practices in Bangladesh is also in a favourable position for the boys. Father's decision-making power go for boy's education. Moreover, girl's work still does not get monetary value because most of the time, they are engaged in household work as a helping hand of their parents. If she tries to move outside for money-generating work, there is also the possibility of physical and mental harassment. This fear of harassment also changes the mind of the daughter to leave from education while she continuously faces a threat on the way to school. Society fails to give them the security to study, to work, to live. However, if any courageous and lucky girl can reach to school after all these hassles, the school waits for them with a bundle of problems. Lack of qualified teachers, female teachers, resources, facilities, sanitation all is simultaneously working for girl's dropout while the government is trying to retain the girl's students. The government introduces FSP for the betterment of the rural girls in secondary education, hence the indirect costs and other issues are still considered as burden. FSP has its good and bad side of determining girl's education at the secondary level. Moreover,

the government has negligence in monitoring the schools, creating more facilities for disadvantaged students, reconstructing the school immediately after the disaster. But in increasing and retaining secondary school girl's students the initiatives taken from the government is commendable in Bangladesh.

In order to address the dropout for girls at the secondary level, it is necessary to consider all the interrelated factors. It is important that the girls come out from the cocoon by ensuring equal access in education, employment, society; left alone all the barriers that once insist her to quit in the middle of the education.

## **8.2 Main results from empirical analysis**

The main finding from empirical is consistent with the literature review section finding. The most significant result is child marriage has a positive and significant correlation with girl's dropout at secondary school in Bangladesh. The most striking result is that the coefficient of the impact of child marriage on the girl's dropout is 1.2 times higher which is a significantly larger impact. This result indicates that every unit increase in child marriage correlated 1.2 times more girl's dropout at secondary school. Moreover, child marriage has a spillover effect on the girl's dropout at secondary school. Girl's education is associated with greater prosperity, reduced child mortality, social progress, etc.

This is commonly assumed that income (GDP per capita) has a negative correlation with girl's dropout. Another most noteworthy finding of this paper is that GDP per capita has a negative and significant correlation with girl's dropout rate at secondary school in Bangladesh. In detail, every unit increase of GDP per capita has .02 or 2% negative correlation with girl's dropout at secondary school. Specifically, increasing income influences reducing girl's school dropout but surprisingly that this coefficient is very small, only 2%. The most plausible explanation for this could be that, apart from income (GDP per capita) some other factors also associated with reducing girl's dropout rate. Thus, when income can associate with others most potential variable, then a girl's dropout will be reduced significantly. We can observe this evidence in table 11 (multiple regression), that when GDP per capita combine with child marriage, then the income effect (GDP per capita) slightly increased ( $0.022 < 0.024$ ) in reducing girls' dropout. Besides, GDP per capita coefficient is statistical significance at 5% level. Thus, based on literature review and empirical findings this paper suggest that policy option will focus not

only the income but also prioritize other significant factors, such as child marriage in reducing girl's pupil dropout at secondary school in Bangladesh.

### **8.3 Strengths**

In my opinion, the objectives of the thesis fulfilled at its best. That, over a myriad of problems in girl's schooling depending on the different circumstances, the paper has tried it best to pick a casket from the important causes for girls' dropout at the secondary level, touching upon the relevant five main head factors. After that, to provide a numerical value the paper analyzed the secondary data and conclude that, income and child marriage are the main reasons for the dropout of girls at the secondary level in Bangladesh which is also consistent with the findings of literature review. Because a growing body of literature, claim child marriage and poverty as a fundamental reason of girl's dropout which is discussed in the review part. A most important strength of this paper is summarized literature review to define the most significant causes for girl's dropout at secondary school. There are several kinds of literature discuss based on a very small dataset, and some literature also used a larger dataset. However, this paper able to combine the most relevant literature to define actual causes for girl's pupil dropout. In the empirical section, this paper used macro data and results also consistent with the literature review findings.

### **8.4 Limitations of this thesis**

No study is free of limitations. This paper is based on available published literature and secondary data analysis for the period of 2000 to 2018, for this reason, the availability of information is one of the main limitations. Moreover, this paper could not touch all the relevant literature and do not find all relevant year-wise aggregated data that might help to enrich the study. Besides, some literature focuses mainly on the girl's dropout at the secondary level in Bangladesh. Based on the available literature, this paper mostly focuses in detail on the common factors that inherent in dropout rather than the processes, precursors, and transition of dropout. Some of the most significant issues such as natural disasters, climate change, disability, girls' labor in the market factors are often disguised in these findings of the literature. There was not enough literature that particularly works on girls' child labor in the context of

the labor market. Noted that, the methodology of this thesis in the review of the literature part, depends upon the available literature selected for the paper. This paper tried at best to bring combined both qualitative and quantitative findings from the literature.

There are some significant limitations I found while studying literature, which is also similar with other literature. For example, the author put it that, more “meditative effects” or “causal effects” based study is needed to be studied in order to get a clear picture of each factor (Shahidul & Karim, 2015, p. 33). On the other hand, though the causes of school dropout are widely discussed in several works of literature but it is hard to find their “relative strength” because a few numbers of quantitative studies which are based on “cross-sectional studies” have limited information regarding “life course of children”, “their household context” and “schooling experiences” (Sabates et al., 2013, p. 225). These limitations need to be properly addressed in order to enrich the literature regarding dropout.

The main challenge for this data analysis section is that multiple regression cannot add a more independent variables to define potential causes of girl’s dropout because then this regression will face the multicollinearity problem. In addition, data is not available for the few most significant variables. For example, child labor has a significant effect on the girl’s dropout. However, child labor data are available for only two years (see table 4) because this type of data is not collected every year basis. Thus, the availability of data became the main challenge to analysis girl’s dropout at secondary school in Bangladesh.

## **8.5 Suggestions for further research**

Based on the limitations, I suggest that further research can include to find out the relative weight of each factor that creates dropout for girls at the secondary level in Bangladesh. More specific quantitative research can resolve the requirement by putting the exact changes of dropout that belong to the perceived causes. Moreover, there are few numbers of available literature that mainly addresses the girl’s dropout reasons at the secondary level in Bangladesh; rather the authors were mostly involved in finding out the causes of dropout for both and girls. As well as more studies should cover the problem of disadvantaged girl students, girl labor in the money market and finding out the way to hold and bring them back in education that will necessarily help to reduce the problem dropout.

## **8.6 Policy implications**

According to the literature review and empirical analysis, policies implication to reduce girl's dropout at secondary school; the policyholder, NGO or government should rethink the existing plans as well as create policy by providing equal importance to each factor. It is not possible that poverty or less of income will be disguised from Bangladesh overnight. But it can turn its population into human capital by providing equal opportunities for education means more budget allocation on education by sacrificing other allocation. However, to reduce the girl's dropout priorities can be addressed to reducing child marriage by creating awareness in society, more campaign program, more educated and trained female teacher who can teach the girls and parents about the adverse effect of early marriage. To enhance school enrollment, retention and reduce dropout, the government can implement more financial and non-financial incentives that consider the actual cost of sending a girl to school as well as allowing parents to have access to better information will lead to reducing girl's dropout at secondary school in Bangladesh. Last but not least the government of Bangladesh should enhance the safety and security of girls by assuring the proper law enforcement, that the lack of security inhibits the girls from coming out of the cocoon.

## **8.7 Conclusion**

In conclusion, the literature review and empirical finding suggest that girl's dropout itself is a single phenomenon in a girl's life, but it has a sequential effect that continues for generations. Those factors are depending on the collaborative effort of family, society, government and the changing perception about female education that is continuing for generations.. Thus, the government expenditure on education should rethink the intervention program that not only increases enrolment but also create the quality sense that retains the girls in schools and parents find it crucial to educate their daughters. The government can make a more sustainable policy to attract foreign donors to invest more in a girl's education and thus creating equity and prosperity in the country. This paper has illustrated most significant causes of girl's pupil dropout rate based on literature review and empirical analysis. An emerging body of literature revealed that child marriage and income are the most significant causes for girl's dropout, and



these are interrelated with socio-cultural, economic, household, school and government infrastructure factors. It really challenging to define exact causes for this dropout because some factors are associated with each other. The main empirical result is that there is negative correlation between income with girl's dropout, this means that increasing income has an impact of reducing girl's dropout. Besides, increasing child marriage has positive correlation with girl's dropout.

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# Appendix

## Appendix one: Reasons of dropout

Reason	Gender		Residence		Year of admission		All
	Male	Female	Rural	Urban	2010 or before	2011 or after	
Inability to bear cost of education	19.8	20.2	19.5	23.3	20.1	20.2	20.1
School is far from home	0.0	1.1	0.9	0.0	1.3	0.5	0.8
Student is not interested in study	55.7	9.9	22.9	20.9	18.8	24.3	22.4
Failure on examination	6.0	2.5	3.7	2.4	3.6	3.3	3.4
Transportation problem	0.0	0.4	0.3	0.4	0.9	0.0	0.3
Illness/disability	1.2	3.4	2.8	2.0	2.7	2.8	2.8
Parents not interested to send	2.4	6.7	5.9	3.6	6.7	4.9	5.6
Marriage	0.0	49.2	35.3	38.2	32.7	37.3	35.8
Have to work at home	0.0	2.2	1.5	2.4	3.6	0.8	1.6
Join in income earning activities	11.4	0.0	3.1	3.2	4.0	2.6	3.1
For going abroad	1.2	0.0	0.3	0.4	0.9	0.0	0.3
Social insecurity	0.0	1.6	0.9	2.0	0.9	1.3	1.1
Religious barrier	1.2	0.7	0.9	0.0	0.9	0.8	0.8
Others	1.2	2.0	1.9	1.2	2.7	1.3	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: (S. R. Nath et al., 2017, p. 46)

## Appendix Two: Age at marriage

Age at marriage	Residence		Admission year		Total
	Rural	Urban	2010 or before	2011 or after	
12	2.8	1.9	1.4	3.4	2.6
13	10.1	15.7	12.1	10.6	11.3
14	22.3	22.6	22.0	22.7	22.4
15	25.7	29.6	28.4	25.6	26.5
16	22.3	8.2	18.4	19.8	19.3
17	12.8	12.6	10.6	14.5	12.8
18+	4.0	9.4	7.1	3.4	5.1
All	100.0	100.0	100.0	100.0	100.0

Source: (S. R. Nath et al., 2017, p. 47)

### Appendix Three: Dropout rate by father's education

Father's Education	Gender			Residence			All
	Male	Female	Significance	Rural	Urban	Significance	
Nil	10.2	23.4	p<0.001	16.9	20.9	p<0.10	17.6
Grades I-IV	11.9	20.2	p<0.01	16.7	16.9	ns	16.7
Grades V-IX	8.7	17.5	p<0.001	14.4	11.1	p<0.10	13.7
Grades X+	5.2	7.5	ns	8.8	3.0	p<0.001	6.5
Significance	p<0.05	p<0.001		p<0.01	p<0.001		p<0.001

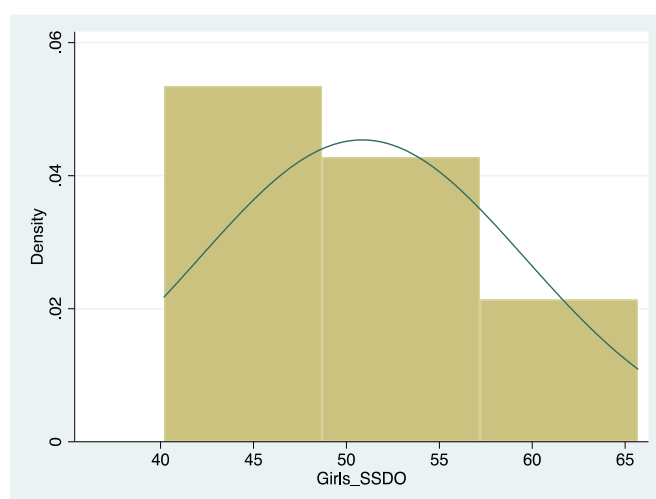
Source: (S. R. Nath et al., 2017, p. 74)

### Appendix Four: Dropout rate by mother's education

Mother's Education	Gender			Residence			All
	Male	Female	Significance	Rural	Urban	Significance	
Nil	11.9	29.3	p<0.001	21.8	22.2	ns	21.9
Grades I-IV	14.5	19.8	p<0.05	18.0	15.2	ns	17.4
Grades V-IX	6.7	12.6	p<0.001	10.2	9.6	ns	10.1
Grades X+	1.3	6.3	p<0.05	5.4	2.6	ns	4.1
Significance	p<0.001	p<0.001		p<0.001	p<0.001		p<0.001

Source: (S. R. Nath et al., 2017, p. 74)

### Appendix Five: Histogram of Girl's secondary school dropout rate



Data Source: (BANBEIS, 2018)